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ABSTRACT

UNESCO, in cooperation with several other organizations, has produced a manual, the scope and purpose of which has been to define, for most types of scientific and technical literature, a set of data elements which will constitute an adequate bibliographic citation, and to define the representation of these data elements as they should appear in a machine record for exchange purposes between two or more computer-based systems. In the first section the format and content of bibliographic records are defined, as well as the notations of literature type and bibliographic level and the sets of data elements regarded as essential for each type of literature. Next are detailed definitions of each individual data element, and guidance on how the data element content is to be selected and entered. A third section provides more detailed specifications of the record format, character coding and other matters of concern to computer system designers. Finally, there are examples showing complete bibliographic descriptions prepared in accordance with the conventions described in the manual. The appendixes include information on codes, transliteration schemes, and tables. (Author/LS)

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Reference Manual for machine-readable bibliographic descriptions

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Reference Manual for machine-readable bibliographic descriptions

Prepared by
the UNISIST/ICSU-AB Working Group on Bibliographic Descriptions
with the assistance of ICSU and ICSU-AB member services

Compiled by M.D. Martin

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Unesco, Paris 1974

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Introduction

This *Reference Manual*, prepared by the UNISIST/ICSU-AB Working Group on Bibliographic Descriptions, represents the results of some four years' work by an international group brought together within the framework of UNISIST, the ICSU-UNESCO joint project to study the feasibility of a world science and technology information network.

The Working Group (referred to hereafter as 'WGBD') has been a special concern of the ICSU Abstracting Board in co-operation with Unesco. It has included direct or indirect representation of all the ICSU-AB member services, together with other experts serving in an individual capacity or as representatives of organizations with special interests in mechanized information processing, including ISO, FID, IFLA, IATUL, INIS and OECD.

The scope and purpose of the WGBD's work has been to define, for most types of scientific and technical literature commonly covered by secondary information services, a set of data elements which will constitute an adequate bibliographic citation. For each type of literature, an essential minimum set is identified, together with additional supplementary elements. It cannot be emphasized too strongly, however, that the sets of data elements defined in the *Manual* are not to be regarded as exclusive. The WGBD has been well aware that for many applications the bibliographic description must be supplemented with additional information. The group's purpose has been to define a minimum set of data elements which could be agreed upon by abstracting and indexing services, to facilitate the exchange of information between services, and to enable them to present their computer-based products to the user in a more compatible and therefore more easily usable form. It is hoped, nevertheless, that this *Manual* will find other applications in the wider field of information processing and exchange.

The scope of the WGBD's recommendations is further limited to defining the representation of these data elements as they should appear in a machine record for exchange purposes between two or more computer-based systems. Nothing in the *Reference Manual* should be interpreted as attempting to lay down standards for input or display formats. A local system may choose any input format which is convertible by computer programme to the exchange format; and the exchange format has been designed with the aim of retaining the highest degree of flexibility for deriving different types and arrangements of output, whether in the form of computer printout or printed publications such as abstracts journals and indexes.

It has been the policy of WGBD to work as closely as possible within the framework of ISO recommendations wherever they exist. Some aspects of the group's work have been or will be submitted to ISO for consideration as international recommendations; and reference is made to current and forthcoming ISO recommendations and standards, wherever possible.

In particular, the bibliographic exchange format described in the *Manual* is an implementation of an international standard ISO 2709: 'Documentation - Format for bibliographic information interchange on magnetic tape' [1].

A first draft of the *Reference Manual* was completed early in 1972, and was the subject of a test conducted by an independent expert organization (University of Sheffield, Postgraduate School of Librarianship and Information Science), with the co-operation of an international group of libraries and secondary information services. A report was submitted to a Working Group meeting in November 1972, and the results of the test and subsequent discussions have been incorporated in an extensive revision of the *Manual*.

It must be emphasized that the *Manual* does not set out to be a training manual for staff who are unfamiliar with bibliographic problems or computer applications in this field; nor is it intended as a cataloguing manual to be placed in the hands of library or information staff engaged in the actual preparation of bibliographic descriptions on a day-to-day basis.

It is to be regarded as a specification manual for technical management and systems design staff in information centres, abstracting and indexing services, and libraries, to assist them in designing local systems in such a way that they can exchange files in either direction with other centres which have adopted the *Reference Manual* format. The reader of the *Manual* is therefore expected to be already familiar with the fundamentals of bibliographic data handling in mechanized and manual systems.

It also needs to be emphasized that the *Reference Manual* does not represent a single monolithic standard which must be applied unvaryingly to all situations. There are various degrees of freedom in the application of the conventions which it describes: and it is expected that individual users or other groups will select a level of implementation which is appropriate to their functional requirements. Areas of implementation choice are identified as they arise in Parts 1 and 2 of the *Manual*.

The *Reference Manual* is presented in four parts.

Part 1 defines in broad outline the format and content of bibliographic records, the notions of literature type and bibliographic level, and the sets of data elements regarded as essential for each type of literature.

Part 2 gives detailed definitions of each individual data element and, where necessary, guidance on how the data element content is to be selected and entered.

Part 3 provides more detailed specifications of the record format, character coding and other aspects which are primarily of concern to computer system designers.

Part 4 consists of a set of examples showing complete bibliographic descriptions prepared in accordance with the conventions described in the Manual.

Additional background information is given in a series of appendices.

Part 1

Chapter 1.1

BIBLIOGRAPHIC RECORDS

For the purposes of the *Reference Manual*, a *bibliographic record* is defined as a collection of information which pertains to a single document, and which is stored in machine-readable form as a self-contained and unique logical structure. A bibliographic record is likely to include a bibliographic description of the document in question; some form of classification and/or indexing applied to the subject content of the document; an abstract or summary; and other information. The *Reference Manual* is concerned only with that part of the record which constitutes the bibliographic description. Additional user-defined data fields will be required in order to carry such other information as may be needed for a particular application.

From the computer system point of view, it should be noted that the *Reference Manual* definition of a bibliographic record constitutes a logical record, with no special assumptions regarding the breakdown into physical records or blocks on a recording medium.

Documents

A *document* is any published item which is to be described in a bibliographic record. Since the *Reference Manual* is primarily designed for secondary information services which provide access to current and past literature, a document need not be a single physical piece. It may be an article, chapter or other contribution; it may be a volume or monograph; or it may be a (non-serial) collection which is to be treated as a single item for purposes of recording.

Specific classes of document ('literature types') which are covered in the present *Manual* are:

Serials (including serial contributions)
Books (including book chapters, and collective works)
Conference publications (including individual conference papers)
Reports (including report chapters)
Theses and dissertations
Patent documents

Bibliographic description

The *bibliographic description* of a document is a collection of information which is intended to provide a unique and unambiguous reference, such as will enable a librarian to identify and retrieve the document, or an intending purchaser to order it from the publisher or other source. It must be borne in mind that the prime function of secondary information services is to inform their users of the existence of relevant documents, and to provide this information in such a form as to enable the user (a) to retrieve relevant references (b) to assess the likely value of the documents referred to and (c) to obtain original documents on the basis of the references given.

The most important function of the bibliographic description is to meet objective (c), although some data elements (title, author name, author affiliation, etc.) may be considered equally important for retrieval or relevance assessment. It is important to draw a clear distinction between 'bibliographic description' and 'bibliographic record'. The term 'bibliographic description' refers to the information which is required in order to describe a given document. A bibliographic description is made up of a number of 'data elements'. The term 'bibliographic record', properly speaking, refers to the structure within which the bibliographic description is stored in machine-readable form. A bibliographic record is made up of a number of 'data fields'.

Data elements

A *data element* is a piece of information forming part of the bibliographic description and having a specific functional relationship with the content of the document to which the record refers. Examples of data elements are: title, author name, patent number.

Data elements are separately identified within the machine record so that each element can, if desired, be independently accessed and manipulated by computer programme. This is achieved by dividing the bibliographic record into a series of *data fields*, identified by *field numbers* or *tags*. Data fields are further subdivided into subfields, introduced by subfield identifiers. Each data element normally occupies a given subfield of a tagged data field.

Data fields

More details of the format and structure of the machine record are given in Part 3. For the purposes of Parts 1 and 2 of the *Manual*, however, it is important to have a basic understanding of the layout of data fields.

The machine record has three distinct parts: a fixed-length leader (the content of which is described in Part 3); a variable-length directory; and variable-length data fields. The directory may be regarded as a list of field numbers or tags identifying the data fields which are present in the record, and providing pointers to the location of the fields within the variable-length data part of the record. Thus the field number or tag which identifies the data field is not contiguous with the data field itself.

Each data field begins with two or more indicator characters, followed by one or more subfields, followed by a field separator.

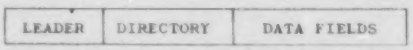
The number of indicator characters at the beginning of each field is predetermined for a given implementation of the *Reference Manual*: the *Manual* requires a minimum of two, but additional indicators may be included at the user's discretion. Each subfield consists of a subfield

identifier followed by a data string. The subfield identifier is a two-character code, of which the first character is the ISO symbol IS_1 (for convenience, represented throughout the *Manual* by the symbol '@').

The field separator is the symbol IS_2; whenever a data field is represented in the *Reference Manual*, however, the field separator is omitted, but should be understood to be always present at the end of the last or only subfield.

The following is a schematic representation of the record and data field layouts described above:

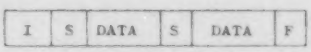
Record layout:



Data field layouts:

Single subfield

Two subfields



(I = indicators, S = subfield identifier, F = field separator)

Examples of data fields as represented in the *Reference Manual*:

Single subfield: ∅1␣␣@∅UNISIST@∅Reference␣Manual

Two subfields: ∅␣␣1UNESCO␣␣2ICSU

(Here the first two digits are indicators; '@∅', '@1' and '@2' are subfield identifiers; '␣' represents 'blank' or 'space'; and note that the field separator is not shown).

Character sets

The intention has been that the *Reference Manual* should provide an exchange record format which would be receptive to any required character set for a given subject field, basing the character set representations on existing ISO Recommendations and extensions thereof. Consequently, examples of data fields shown in the *Manual* frequently use a character set which is much wider than is provided by conventional computer coding systems. However, within the general framework of ISO Recommendations, it is again open to the user to determine what particular subset he needs to meet his functional requirements.

Summary

Much of the information given in the preceding paragraphs is amplified elsewhere in the *Manual*, notably in Part 3. The purpose of this section has been to introduce some of the terminology and conventions which are basic to Parts 1 and 2. Essentially the *Reference Manual* attempts to define an exchange format for that part of a machine-readable bibliographic record which contains the bibliographic description of the document to which the record refers. The bibliographic record is a collection of data fields as described above. The remainder of Part 1 is devoted to defining an appropriate set of data fields, and its application to the description of various types of literature likely to be encountered in secondary information services.

Chapter 1.2

LITERATURE TYPE

It is notoriously impossible to divide published literature into rigorously defined types. Nevertheless, for practical purposes, and having regard to the existing procedures of most abstracting and indexing services, it has been found necessary to attempt to categorize the types of literature covered by the *Reference Manual*, as follows:

Serials
Books
Reports
Theses and dissertations
Patent documents
Conference publications

In practice, the selection of data elements to be included in the bibliographic record is usually guided by a prior selection of the type or types of literature to which the document is regarded as belonging. In many cases, this selection is straightforward and unique: for example, it is usually easy to identify a patent. Sometimes, however, a document may have the characteristics of more than one type (for example, 'serial' and 'report'). In this event, the approach to be followed will depend on the policy of the service concerned. Some services may wish to treat the document as belonging to more than one literature type, and thus include data elements pertaining to both. Others may prefer to limit the bibliographic description to a single type, and the choice of type may become somewhat arbitrary, depending on the functional requirements of the data base. While it is recognized that hard and fast definitions of literature types cannot be provided, this chapter attempts to set out some guidelines on the interpretation of the six types listed above.

Serials

The definition of a serial adopted for the *Reference Manual* is that given in the *Guidelines for the International Serials Data System (ISDS)* [2]:

"A serial is a publication in print or in non-print form, issued in successive parts, usually having numerical or chronological designations, and intended to be continued indefinitely. Serials include periodicals, newspapers, annuals (reports, yearbooks, directories, etc.), journals, memoirs, proceedings, transactions etc. of societies, and monographic series.

"It should be noted that this definition does not include works produced in successive parts for a period predetermined as finite, and that it allows the inclusion of unnumbered series".

The *Reference Manual* does not, however, cover serials as entities in themselves, in the manner in which they would be referred to in a library catalogue, a national bibliography, or in ISDS. The coverage of serials is limited to the description of articles or contributions published in a serial issue, and monographic items where an issue or part of a serial consists of a single contribution.

Consequently, the data elements defined in the *Manual* for description of a serial as such are limited to its identification code (International Standard Serial Number or CODEN) and an abbreviation of the ISDS 'key title'. For details of a machine format for fuller bibliographic description of serials, see *Guidelines for ISDS*.

Books

No fully satisfactory definition of a 'book' has been found, but the following (based partly on INIS conventions) may be used as guidelines.

A book is a published item, available to be purchased through normal commercial channels; bound but not necessarily in hard covers; carrying a publisher's name, place and date of publication; and not falling obviously into one of the other categories defined in this chapter. It may

also be a finite collection of such items (i.e. a multi-volume work), published simultaneously or during a predetermined period of time.

A book may contain individual chapters or parts by separate authors and/or covering separate topics, so that in secondary information services it may be appropriate to treat such chapters or parts as 'documents' in their own right.

Reports

'Reports' are also particularly difficult to define: again, the following are suggested as guidelines.

A report is a published item, usually *not* available to be purchased through normal commercial channels, but obtainable from the organization responsible for its issue or from a clearinghouse such as the United States Government NTIS. It is usually - but not always - identified by a report number; and may exhibit some of the characteristics of a serial, in that the numbering scheme often has a component for 'report series', and there may sometimes be a series title.

A report may contain individual chapters or parts by separate authors and/or covering separate topics, so that in secondary information services it may be appropriate to treat such chapters or parts as 'documents' in their own right.

Theses and dissertations

Theses and dissertations may be defined as treatises which have been submitted to a university or other educational institution in fulfilment of the requirements for a higher degree course. Most frequently they are not 'published' in a conventional sense, but they may be available through the university concerned or through a clearinghouse system. Some theses are subsequently published in book form, and it would be recommended that these should be treated as 'books', with the option of including data elements appropriate to a thesis as part of the bibliographic description.

Patent documents

Patent documents are documents published or laid open for public inspection by a patent office, and falling into one of the following categories: patents, inventors' certificates, utility models or certificates, and applications therefor. Since the legal definitions of these different types depend on differing national practices, and since they will generally be well understood by those services which cover patent documents, no fuller definition will be attempted in the *Manual.* A list of patent documents arranged by type of document is given in Appendix D.

Conference publications

Conference publications are a special category, in that they do not in themselves constitute a separate literature type. Papers presented at a conference may be published in any of a number of forms: as books, as contributions to or issues of a serial, or as reports.

For the purposes of the *Reference Manual,* individual papers which happen to have been presented at a conference are not necessarily to be regarded as conference publications, although some users may consider it worthwhile to include a reference to the conference in such cases. Reference to the conference is regarded as *essential* if and only if the document(s) are explicitly described as constituting the official publication of the conference proceedings. This may, again, apply to a book, a serial issue, or a report.

Consequently, 'conference publication' is never a *complete* description of the literature type: the document(s) concerned must also be identified as belonging to one of the other categories named in the last paragraph.

For any document identified as belonging to a conference publication, a small set of additional data elements is defined, to be *added to* the set of essential elements required for whatever main literature type is invoked.

Literature type codes

In the bibliographic record, the literature type or types to which the document is considered to belong are represented by codes in the leader position of the record (see Part 3 for details).

The following literature type codes may be used either in isolation, or in combination if the document has characteristics of more than one type:

Serial, Book, Report, Thesis or Dissertation, Patent.

The following literature type code may be used *only* in combination with another code:

Conference publication.

Note, however, that it is not obligatory to use more than one literature type code if the document has characteristics of more than one type. It is equally permissible, as an implementation option, to assign a document to a single main type, while including in the bibliographic description some data elements which describe aspects of a different type. For example, if a report belongs to a report series, it is permissible to include an ISSN and a series title in the record without formally identifying the document as being of type 'serial'.

The selection of *essential* data elements for the bibliographic description is dependent first on the assignment of the document to a given literature type or types; and secondly, on a decision as to the *bibliographic level* at which the document is to be treated. The notion of bibliographic level is defined in the next chapter.

Chapter 1.3

BIBLIOGRAPHIC LEVEL

The notion of 'bibliographic level' may be novel to some users, but it is increasingly widely employed in mechanized information systems such as INIS and MARC.

Its purpose is to define unambiguously the different types of record which are required when the document to be recorded is:

(a) a part of a larger physical piece: for example, an article in an issue of a journal; a chapter in a book; a section in a report.

(b) a single piece in its own right: for example, an issue or part of a serial; a book in one volume; a report; a patent document.

(c) a collection of physical pieces: for example, a multi-volume work issued at one time, or over a predetermined and finite period of time.

When the document selected for recording in the machine system is a part of a larger physical piece, the record is said to be at the *analytic* level.

When the document is a single piece in its own right, the record is said to be at the *monographic* level.

When the document is a collection of physical pieces, the record is said to be at the *collective* level.

If the document is at the *analytic* level, it will always be necessary to include data elements which describe the monographic and/or collective entities of which it forms a part, in order to give a complete bibliographic description. However, the record is always assigned the *lowest* applicable bibliographic level.

Thus, a record at the *analytic* level must always include data elements which provide at least one higher level of bibliographic description. A record at the *monographic* level may stand alone, or it may include details of a collection of which the monograph forms part. A record at the *collective* level always stands alone.

In many systems, a fourth level - *serial* - is also identified, to distinguish between a serial publication as defined in Chapter 1.2 and a non-serial collection. In the *Reference Manual*, this level is not used, since the scope of the *Manual* does not include the bibliographic description of serials as such.

Just as the selection of data elements is guided by the assignment of the document to one or more 'literature types', so also it is dependent, within literature type, on the bibliographic level at which the document is to be treated.

For the purposes of the Reference Manual, the table below shows the combinations of literature type and bibliographic level which are permitted:

	Analytic	Monographic	Collective
Serial	✓	✓	
Book	✓	✓	✓
Report	✓	✓	
Thesis		✓	
Patent	✓*	✓	

*if taken from a comprehensive announcement in an official gazette

Note that the designation 'conference publication' may be used in combination with any of the literature types listed above, at any bibliographic level.

The bibliographic level is identified by a code in the leader part of the record: see Part 3 for details.

Chapter 1.4

BIBLIOGRAPHIC DATA FIELDS

This chapter constitutes a complete reference list of the bibliographic data fields which are defined in full in Part 2 of the *Reference Manual*, and from which a selection must be made in order to construct a bibliographic record appropriate to a particular literature type and bibliographic level.

The reference list is given as a series of tables in which the data fields are shown in alphanumeric sequence of field codes or tags, which are three-character codes in the range AØ1 to A99.

For each data field, the tables show the literature type and bibliographic levels for which the field is rated as 'essential'. Other data fields may be included in the bibliographic record if desired, and Chapter 1.5 gives a more detailed breakdown by literature type, showing additional fields which are recommended for inclusion as 'supplementary' (The terms 'essential' and 'supplementary' are defined in Chapter 1.5). Some data fields, however, are optional for all types of literature, and these are indicated in the tables by an asterisk against the tag.

It should be noted that a data field which is rated as 'essential' may include optional subfields. The detailed data element definition in Part 2 will indicate what constitutes the essential portion of each field. (For example, field AØ8 and other 'title' fields have an optional subfield to indicate the language of the title).

Since it is natural to approach the design of input and conversion procedures by a somewhat hierarchical route, based on the selection of the types of document which are to be handled, it is expected that the systems designer will work primarily from Chapter 1.5, associated with the detailed definitions in Part 2. However, the tables on subsequent pages provide in one place a complete list of the UNISIST *Reference Manual* data elements, with an indication of their status.

Tag	Field name	Serial		Book			Report		Thesis	Patent
		A	M	A	M	C	A	M	M	A/M
AØ1	International Standard Serial Number (ISSN)	E	E							
AØ2	CODEN (interim alternative to ISSN)	*	*							
AØ3	'Short title' of serial	E	E							
AØ4*	Series designation									
AØ5	Volume number	E	E	E[1]	E[1]					
AØ6	Issue or part number	E	E	E[1]	E[1]					
AØ7	Other identification of issue or part	E	E							
AØ8	Title of contribution (analytic)	E		E			E			
AØ9	Title of volume, monograph or patent document		E	E	E		E	E	E	E
A1Ø	Title of collection			E[1]	E[1]	E				
A11	Person associated with a contribution	E		E			E			
A12	Person associated with a monograph		E	E	E			E	E	
A13	Person associated with a collection					E				

1. For books (at analytic and monographic levels) fields AØ5, AØ6 and A1Ø are essential only if the item is part of a collection having numbered parts.

* Tags marked with an asterisk indicate data elements which are never designated as essential.

Tag	Field name	Serial		Book			Report		Thesis	Patent
		A	M	A	M	C	A	M	M	A/M
A14	Affiliation - contribution	E		E			E			
A15	Affiliation - monograph		E							
A16*	Affiliation - collection									
A17	Corporate author - contribution	E		E			E			
A18	Corporate author - monograph		E		E			E		
A19	Corporate author - collection					E				
A2Ø	Page numbers	E	E	E			E			
A21	Date of issue or imprint	E	E	E	E	E	E	E	E	
A22	Date of publication[2]									E
A23	Language(s) of text	E	E	E	E	E	E	E	E	
A24*	Language(s) of summaries									
A25	Publisher: name and location (monograph or collection)			E	E	E				
A26	International Standard Book Number[3] (ISBN)			E	E	E				
A27	Edition			E	E	E				

2. Field A22 may be used for any literature type where the actual date of publication is known to differ from the nominal date of issue.
3. Field A26 (ISBN) may be used for any type of literature if the publisher has chosen to assign an ISBN to the piece being recorded.

* Tags marked with an asterisk indicate data elements which are never designated as essential.

Tag	Field name	Serial		Book			Report		Thesis	Patent
		A	M	A	M	C	A	M	M	A/M
A28	Collation: description of non-serial collection					E				
A29	Collation: description of monograph				E	E		E	E	E
A3Ø	Name of meeting[4]									
A31	Location of meeting[4]									
A32	Date of meeting[4]									
A33	Identification of patent document									E
A34	Person associated with a patent document									E
A35	Corporate body associated with a patent document									E
A36*	Domestic filing data									
A37*	Convention priority data									
A38*	Reference to a legally-related domestic document									
A39	Report number						E	E		

4. Fields A3Ø, A31 and A32 are essential - regardless of literature type - if and only if the piece is formally designated as constituting the published proceedings of a meeting.

* Tags marked with an asterisk indicate data elements which are never designated as essential.

Tag	Field name	Serial		Book			Report		Thesis	Patent
		A	M	A	M	C	A	M	M	A/M
A4Ø*	Name of performing organisation									
A41	University (or other educational institution)								E	
A42*	Degree level									
A43	Availability of document						E	E	E	
A44*	Source of abstract									
A45*	Number of references									
A46*	'Summary only' note									
A47*	Abstract number(s)									
A99	Ancillary data									

* Tags marked with an asterisk indicate data elements which are never designated as essential.

Chapter 1.5

SELECTION OF DATA ELEMENTS

This chapter embodies the recommendations of the UNISIST/ICSU-AB Working Group on Bibliographic Descriptions as to the *essential data elements* required for the bibliographic description of each literature type defined in Chapter 1.2. In addition, certain other data elements are defined as *supplementary* for each literature type.

These two categories - 'essential' and 'supplementary' - must be interpreted in the light of the WGBD's stated purpose to define a minimum set of data elements required for the exchange of reliable bibliographic data between computer-based systems. Some users will find that information which is regularly included in their own systems is omitted from the lists of data elements given in this chapter. It must be stressed that the *Manual* is not intended to be exclusive; it is to be expected that users will define additional local data fields, while standardizing on the basic 'core' set of bibliographic data elements listed in the *Manual*.

The category 'essential' is defined as meaning that any data element so described must be included in the bibliographic description if it is either present on or derivable from the original piece (in some instances, with the assistance of an external authority: for example, a serial title code - either ISSN or CODEN - is an essential element for serials, although it will usually be necessary to refer to ISDS or CODEN services in order to obtain the code).

In this context, the designation 'essential' must not be taken to mean that it is necessarily valid in computer systems design to incorporate checks which require the inclusion of 'essential' data elements in all records for a particular literature type. In many cases, valid circumstances may arise in which an 'essential' data element is absent (e.g. authorship may be unidentified; a report may be unnumbered). The category 'supplementary' is defined as meaning that:

(a) Any data element so described is regarded as being relevant to the literature type in question, and likely to provide useful information, worthy of inclusion in the bibliographic record.

(b) The data element is not, however, an absolute requirement for complete, unambiguous bibliographic description, and its inclusion is therefore optional, at the discretion of the individual user or system designer.

The fact that a data element is not designated as either 'essential' or 'supplementary' for a given literature type does not mean that it cannot or should not be included in bibliographic records of this type, provided that it is present on or derivable from the piece. This again is an area where users of the *Manual* are presented with a free choice. The designation 'supplementary' is primarily intended to draw attention to data elements whose inclusion is recommended, but not regarded as obligatory.

Thus, the fact that a blank ('–') appears against a particular data element in the tables in this chapter does not necessarily mean that the element in question is 'illegal' in the given context.

In particular, where an individual piece has the characteristics of more than one literature type, some users may wish to include whatever additional data elements are necessary for a full description. Others may prefer to limit the bibliographic record to the essential data elements for one particular literature type, depending on the functional requirements of their data base. Either approach is an equally valid implementation of the *Reference Manual.*

Section 1.5.1: SERIALS

Bibliographic level

The scope of the *Reference Manual* does not extend to the cataloguing of serials at the collective level (for which see, for example, *International Standard Bibliographic Description for Serials* [3] and *Guidelines for ISDS* [2]).

Since the main concern of the *Reference Manual* is with the bibliographic description of individual scientific and technical documents, as covered in secondary information services, provision is made only for the description of *serial contributions,* at the analytic level, and *serial issues or parts*, at the monographic level, in the event that the issue or part is to be treated as a single document.

Data element matrix for serials

This matrix is a subset of the full data element matrix given in Chapter 1.4, showing those items which are considered to be essential data elements for serials, and those which are considered to be supplementary data elements. Detailed definitions of each element are given in Part 2 of the *Manual,* which can be referenced by the tag code shown in the matrix. Status code 'E' means that the data element must be included if present on or derivable from the original document (thus, for example, a serial title code – either ISSN or CODEN – is an essential data element even though it may not appear on the piece). Status code 'S' means that the data element is not a required bibliographic data element, and that its inclusion is at the discretion of the individual user.

Description	Tag	Status	
		A*	M
Serial title code			
either ISSN	AØ1	E	E
or CODEN	AØ2	E	E
'Short title' of serial	AØ3	E	E
Series designation	AØ4	S	S
Volume number	AØ5	E	E
Issue or part number	AØ6	E	E
Other identification of issue or part	AØ7	E	E
Title of contribution	AØ8	E	–
Person associated with a contribution	A11	E	–
Affiliation - contribution	A14	E	–
Corporate author - contribution	A17	E	–
Title of volume or monograph	AØ9	–	E
Person associated with a volume or monograph	A12	–	E
Affiliation - monograph	A15	–	E
Corporate author - monograph	A18	–	E
Page numbers	A20	E	E
Date of issue or imprint	A21	E	E
Date of publication (if different from date of issue)	A22	S	S
Language(s) of text	A23	E	E
Language(s) of summaries	A24	S	S
Number of references	A45	S	S

*A = Analytic M = Monographic

Section 1.5.2: 'BOOKS' (NON-SERIAL COLLECTIONS AND MONOGRAPHS)

Bibliographic level

In this section, the notion of bibliographic level is used to distinguish between bibliographic records which refer to:

(a) A collection of books, treated as a single entity (collective)

(b) A monograph or single volume from a collection (monographic)

(c) A chapter in, or contribution to, a volume or monograph (analytic)

Data element matrix for books

This matrix is a subset of the full data element matrix given in Chapter 1.4, showing those items which are considered to be essential data elements for books, and those which are considered to be supplementary data elements. Detailed definitions of each element are given in Part 2 of the *Manual*, which can be referenced by the tag code shown in the matrix. Status code 'E' means that the data element must be included if present on or derivable from the original document. Status code 'S' means that the data element is not a required data element, and that its inclusion is at the discretion of the individual user.

Description	Tag	Status		
		A*	M	C
Data elements describing a collection of books				
Title of collection	A1Ø	E**	E**	E
Person associated with a collection	A13	–	–	E
Affiliation collection	A16	–	–	S
Corporate author - collection	A19	–	–	E
Collation: description of non-serial collection	A28	–	–	E
Data elements describing a volume or monograph				
Volume number	AØ5	E**	E**	–
Part number	AØ6	E**	E**	–
Title of volume or monograph	AØ9	E	E	–
Person associated with a monograph	A12	E	E	–
Affiliation - monograph	A15	S	S	–
Corporate author - monograph	A18	S	E	–
Collation: description of monograph	A29	S	E	–
Data elements describing a chapter or contribution				
Title of contribution (analytic)	AØ8	E	–	–
Person associated with a contribution	A11	E	–	–
Affiliation - contribution	A14	E	–	–
Corporate author - contribution	A17	E	–	–
Page numbers	A2Ø	E	–	–
'Common' data elements (applicable at any bibliographic level)				
Date of issue or imprint	A21	E	E	E
Edition	A27	E	E	E
Language(s) of text	A23	E	E	E
Language(s) of summaries	A24	S	S	S
Publisher: name & location	A25	E	E	E
ISBN	A26	E	E	E
Number of references	A45	S	S	S

*A = Analytic M = Monographic C = Collective

**Essential only if the item comes from a collection with *numbered* volumes or parts

Section 1.5.3: REPORTS

Bibliographic level

In this section, the notion of bibliographic level is used to distinguish between bibliographic records which refer to:

(a) A report treated as a single published item (monographic)

(b) A chapter or section of a report (analytic)

The collective level is not used for the purposes of this *Manual* (since it may be regarded as corresponding to the collective treatment of a serial publication).

Data element matrix for reports

This matrix is a subset of the full data element matrix given in Chapter 1.4, showing those items which are considered to be essential data elements for reports, and those which are considered to be supplementary data elements. Detailed definitions of each element are given in Part 2 of the *Manual*, which can be referenced by the tag code shown in the matrix. Status code 'E' means that the data element must be included if present on or derivable from the original document. Status code 'S' means that the data element is not a required data element, and that its inclusion is at the discretion of the individual user.

Description	Tag	Status	
		A*	M
Data elements describing a report series			
Report series title code			
Either ISSN	AØ1	S	S
or CODEN	AØ2	S	S
Title of report series	A1Ø	S	S
Data elements describing the report as a whole			
Title of volume or monograph	AØ9	E	E
Person associated with a monograph	A12	S	E
Affiliation - monograph	A15	S	S
Corporate author - monograph	A18	S	E
Report number	A39	E	E
Name of performing organization	A40	S	S
Date of report	A21	E	E
Date of publication (if different from date of report)	A22	S	S
Collation: description of monograph	A29	–	E
Language(s) of text	A23	E	E
Language(s) of summaries	A24	S	S
Availability	A43	E	E
Number of references	A45	S	S
Data elements describing a chapter or contribution			
Title of contribution	AØ8	E	–
Person associated with a contribution	A11	E	–
Affiliation - contribution	A14	E	–
Corporate author - contribution	A17	E	–
Page numbers	A2Ø	E	–

*A = Analytic M = Monographic

Section 1.5.4: THESES AND DISSERTATIONS

Bibliographic level

Theses and dissertations are regarded as exclusively monographic publications; the analytic and collective levels are not used.

Data element matrix for theses or dissertations

This matrix is a subset of the full data element matrix given in Chapter 1.4, showing those items which are considered to be essential data elements for theses and dissertations, and those which are considered to be supplementary data elements. Detailed definitions of each element are given in Part 2 of the *Manual*, which can be referenced by the tag code shown in the matrix.

Status code 'E' means that the data element must be included if present on or derivable from the original document. Status code 'S' means that the data element is not a required data element, and that its inclusion is at the discretion of the individual user.

Description	Tag	Status M*
Title of volume or monograph	AØ9	E
Person associated with a monograph	A12	E
University (or other educational institution)	A41	E
Degree level	A42	S
Date of submission	A21	E
Collation: description of monograph	A29	E
Language(s) of text	A23	E
Availability of document	A43	E
Number of references	A45	S

*M = Monographic

Section 1.5.5: PATENT DOCUMENTS

Definition

'Patent documents' include patents, inventors' certificates, utility models or certificates, and applications therefor. A list of patent documents arranged by type of document is given in Appendix D. Throughout this section, the term 'patents' is to be read as including all types of patent document as here defined.

Coverage of patents by abstracting and indexing services

Those abstracting and indexing services which cover patent documents may do so from either or both of two points of view: either in order to provide a comprehensive coverage of patents in a particular subject field, in sufficient detail to satisfy legal as well as scientific interests; or more selectively, from the point of view of scientific and technical information content.

The *minimum* set of essential bibliographic data elements defined in the *Reference Manual* is designed to satisfy the requirements of this second approach. Some supplementary data elements are also included, but services which aim at a comprehensive coverage of patents as legal documents may need to add further data elements to this set.

Relationship between the Reference Manual and ISO proposals

In preparing this section of the Reference Manual, due account has been taken of ISO/TC 46 (Secr.-611) 1072E (Fifth Draft ISO Proposal: Patents and like documents: bibliographic references: essential and complementary elements) [4]. All elements defined in the ISO Proposal as essential for 'short' bibliographic references to patent documents have been incorporated into the recommendations of the *Reference Manual*.

Relationship between the Reference Manual and ICIREPAT recommendations

This section of the *Reference Manual* has been prepared after full consultation with representatives of the World Intellectual Property Organization (WIPO), and every effort has been made to retain a strict correspondence with the relevant recommendations of ICIREPAT* for the identification and presentation of bibliographic data elements appearing on patent documents.

INID codes

An ICIREPAT recommendation [5] provides for a numeric encoding scheme whereby the various data elements appearing on the first page of a patent document can be identified without knowledge of the languages used for the laws of the country in question. The scheme is already successfully applied by a number of Patent Offices.

This encoding scheme has been given the acronym 'INID' (ICIREPAT Numbers for Identification of Data).

INID codes are printed against relevant data items on the first page of a patent document. They are frequently enclosed in a small circle (see example below); or they may be printed in parentheses or brackets.

(54) **Méthode et appareil pour faire des plaques optiques en fibres conductrices d'image fusionnées ensemble.**

(72) Invention de : Frederik Harwood Norton.

(33) (32) (31) Priorité conventionnelle : *Demande de brevet déposée aux Etats-Unis d'Amérique le 20 juin 1969, n° 835.113 au nom de Frederik Harwood Norton.*

Example

As far as possible, a close correspondence has been maintained between UNISIST recommended data elements and ICIREPAT recommendations. The INID codes are included in the matrix of data elements for patent documents. It should be noted, however, that the conversion is not always on an exact one-to-one basis: see data element definitions in Part 2 for full details.

A complete list of INID codes is given in Appendix E.

*Paris Union Committee for International Co-operation in Information Retrieval among Patent Offices.

Standard code for identification of different kinds of patent documents

ICIREPAT has established a recommendation which provides for an encoding scheme whereby the various kinds of patent documents can be identified. This code is reproduced in Appendix D. It is referred to hereafter in the *Manual* as the 'ICIREPAT code for patent documents', and its use is recommended as the preferred means of identifying document type.

Bibliographic level

Patent documents are normally to be regarded as individual pieces, and thus treated at the *monographic* level. In certain countries, however, the method of publication may be as a notice in an official gazette, which has the characteristics of a serial.

A bibliographic record which was prepared from the patent document itself should therefore be entered at the *monographic* level.

A bibliographic record which is taken from the notice published in an official gazette may be entered at the *analytic* level.

In either case the same set of data elements is used to describe the patent document; but in the second case these data elements may be combined in a single bibliographic record with data elements which describe a serial contribution.

Data element matrix for patent documents

This matrix is a subset of the full data element matrix given in Chapter 1.4, extended to show those items which are considered to be supplementary data elements for patent documents. INID codes corresponding to each data element are also shown. Detailed definitions of each element are given in Part 2 of the *Manual*, which can be referenced by the tag code shown in the matrix.

Status code 'E' means that the data element must be included if present on or derivable from the original document. Status code 'S' means that the data element is not a required bibliographic data element, and that its inclusion is at the discretion of the individual user.

Description	Tag	Status AM*	INID Code
Identification of patent document (includes issuing country, document type, document number)	A33	E	19,11
Title of the invention	AØ9	E	54
Person associated with a patent document	A34	E	71 to 73, 75, 76
Corporate body associated with a patent document	A35	E	
Domestic filing data	A36	S	21, 22, 23
Convention priority data	A37	S	31, 32, 33
Date of publication of patent document	A22	E	41 to 45,47
Reference to a legally-related domestic document	A38	S	61 to 64
Language of document	A23	S**	–
Number of pages	A29	E	–

*AM = Analytic or monographic

**It is recommended that language be included as an essential element where it is not unambiguously identified by reference to the 'issuing country', e.g. in the case of patent documents originating in Canada, Finland, USSR, etc.

Section 1.5.6: CONFERENCE PUBLICATIONS

Conference publications are not regarded as constituting a separate type of literature. Instead, a group of three additional data elements is defined below. These data elements can be used within any record to indicate that the item is part of the proceedings of a conference, whether published as a book, or in a regular journal, or otherwise.

Description	Tag	Status A*	M	C
Name of meeting	AØ	E**	E**	E**
Location of meeting	A31	E	E	E
Date of meeting	A32	E	E	E

*A = Analytic M = Monographic C = Collective

**If the title of the meeting is not included in the title of the publication: optional if the title of the meeting *is* so included.

• Any of these data elements may be used at any bibliographic level.

Detailed descriptions appear in Part 2 of the *Manual*. It should be emphasized that the inclusion of conference details is regarded as essential if and only if the publication is explicity identified as constituting the formal proceedings of a conference. Where individual papers are identified (often in a footnote) as having been presented in the first instance at a meeting, the inclusion of this information in the bibliographic record is optional.

Part 2

DATA ELEMENT DEFINITIONS

Part 2 of the *Reference Manual* provides detailed definitions of data elements, arranged in alphanumeric order of data field codes.

Each data element is defined in terms of:

(a) A brief summary of the essential features *(Field definition)*

(b) A detailed description of the data content *(Data description)*

(c) *Examples,* wherever necessary and appropriate.

However, where a group of fields shares an identical structure, the *field definition* is given in full for each one, but the *data description* is given only under the first, and an additional section defining the *use* of the individual fields is provided.

General conventions

The following conventions are applicable to all fields:

(a) *Indicators*

Indicator positions 1 and 2 are reserved for the uses indicated in the *Manual.* Where they are not so used, they are entered as zeros. If either or both of the indicator positions is used, the value zero is never assigned a specific meaning; but, in general, the user system has the option of entering a zero indicator with the meaning 'not specified' (see, for example, field AØ8).

In the examples, only two indicator positions are shown. In a specific implementation, one or more extra indicator positions would be inserted, if required, after indicator position 2 and before the first subfield identifier.

(b) *Subfield identifiers*

As defined in Part 3, a subfield identifier consists of the ISO character IS_1 and one other symbol (usually a numeric digit). For the purposes of illustration, the IS_1 code is represented by the symbol '@'. Expressions of the form 'subfield Ø', 'subfield 1' are used to designate 'the subfield introduced by the identifier @Ø', 'the subfield introduced by the identifier @1', and so on.

(c) *Field separators*

The field separator character IS_2 is omitted in all examples, but should be understood as being present in the bibliographic record as the character immediately following the end of the data string shown in any example.

(d) *Character coding*

No attempt is made in the examples to reproduce the code structures which would be used in the machine record: all data strings are shown as plain text.

(e) *Representation of 'zero' and 'space'*

To avoid ambiguity, the symbol 'Ø' is used for the number 'zero'. 'Space' or 'blank' is represented by 'ψ'.

(f) *Implementation options*

Where a number of user options exist, it has not always been possible to show all alternatives in the set of examples chosen for a particular data field. In such cases, the selection of a particular option does not imply that this is a 'preferred' implementation.

(g) *'Notes' subfield*

The 'notes' subfield (identifier @N) is an optional subfield which may be included in any data field to incorporate additional free-form information which the user wishes to associate specifically with the content of the field. For this reason, it is shown as a permitted subfield in all data fields, although it will be obvious that its use in connexion with some fields which are themselves free-form is rather improbable. It may, however, have some application in a situation where the user system needs to enter additional information which must be suppressed for the purposes of a particular output, such as a printed publication.

AØ1: ISSN

1. *Field definition*

Tag: AØ1
Indicators: Not used: entered as zeros
Subfields: Ø: ISSN: fixed length, eight characters. Character set restricted to numerals only, except for the last character which may be a numeral or letter 'X'.
N: Notes
Repeatable: No

2. *Data description*

Field AØ1 is used to enter the International Standard Serial Number (ISSN) as a unique identification of a serial title.

The assignment and dissemination of ISSN are the responsibility of the International Serials Data System, based on an International Centre in Paris (Centre International pour l'Enregistrement des Publications en Série: CIEPS) and National or Regional Centres.

The format and basic requirements for the assignment of ISSN are defined in an ISO Standard [6]; fuller details of ISSN assignment and the operation of ISDS are given in *Guidelines for ISDS* [2].

The ISSN is an 8-digit number, the last figure being a check character. (Because of the method of check-digit calculation, the last character may be either

numeric or letter 'X'). Where the ISSN appears on the original piece, it is preceded by the letters 'ISSN', and the number itself is divided into two four-character groups with either a space or a hyphen as separator. In the machine record, the ISSN should be entered in subfield Ø as an eight-character string without separator.

3. *Example*

```
ISSN as shown on the piece:

"ISSN ØØ46-9963"

Contents of field AØ1:

ØØ@ØØØ469963
```

AØ2: CODEN

1. *Field definition*

Tag: AØ2
Indicators: Not used: entered as zeros
Subfields: Ø: CODEN: fixed length, six characters. Character set restricted to upper-case letters and numerals. The sixth character is a check digit.
N: Notes
Repeatable: No

2. *Data description*

Field AØ2 may be used pending the full availability of ISSN to enter a unique identification of a serial title in the form of the ASTM CODEN.

CODEN for serial titles are six-character codes, consisting of five letters and a check character which may be a letter or a numeric digit. The CODEN system is administered by the Franklin Institute, Philadelphia, on behalf of the American Society for Testing and Materials. An index of over 100,000 titles and CODEN is available [7], and CODEN for new or amended titles may be obtained by direct application to the Franklin Institute.

Calculation of check character

The check character is generated as follows:

(a) Each alphanumeric character of the CODEN is replaced by an equivalent value. The equivalents are:
CODEN: A , B . . . Y , Z , 1 , 2 . . . 9 , Ø
Value: 1 , 2 . . . 25 , 26 , 27 , 28 . . . 35 , 36

(b) The procedure used to generate the check character is:
Evaluate $X = (11xN_1)+(7xN_2)+(5xN_3)+(3xN_4)+(1xN_5)$
where N_1, N_2 etc., are the numeric values equivalent to the CODEN characters in the order of their appearance in the CODEN .
Divide X by 34, and take the remainder.

(c) The remainder is then converted to a check character by the following set of equivalents:
Remainder: 1 , 2 . . . 25,26,27,28,29 . . . 33,34(or zero)
Check character: A , B . . . Y , Z , 2 , 3 , 4 . . . 8 , 9
The numerals 1 (one) and Ø (zero) are not used as check characters, to avoid confusion with letters I and O.

Appendix F gives a convenient look-up table for manual calculation of CODEN check characters.

3. *Example*

```
Journal title:  "Annalen der Physik"

CODEN:  "ANPY-A"

Check character, calculated as above:  "2"

Contents of field AØ2:

ØØ@ØANPYA2
```

1. *Field definition*

Tag: AØ3
Indicators: Position 1 not used: entered as zero
Position 2 may take any of the values Ø, 1, 2
Subfields: Ø: 'Short title'
N: Notes
Repeatable: No

2. *Data description*

Field AØ3 is used to enter the title of a serial, abbreviated where appropriate in accordance with ISO standards ISO R4 [8] and ISO 833 [9], and ISDS practice. ISO 833 provides a list of word-abbreviations to be used for serial titles: the responsibility for maintaining and adding to this list rests with the ISDS International Centre, which will provide new word-abbreviations on request.

(The term 'short title' is used here to take account of the fact that in many cases the serial title will not in fact be abbreviated: i.e. wherever the title word or words are not among those listed in ISO 833, or future supplements, as candidates for abbreviation; or where the title consists of an acronym or other non-verbal construction).

The preferred form of title is the ISDS 'key title', as abbreviated in field 210 of the ISDS data base: see *Guidelines for ISDS*. Any 'added parenthetical information' included in the ISDS file in order to ensure the uniqueness of the key title should also be included as part of the 'short title', and should be enclosed within parentheses. The 'short title' should be entered in subfield Ø as a variable-length character string; where it is impossible for practical reasons to use the ISDS 'abbreviated key title', a locally constructed 'short title' may be entered.

Indicators

Indicator position 2 should be used in accordance with the following table of values:

Ø Source of 'short title' unspecified
1 'Short title' derived from ISDS files or authority lists (and therefore consistent with ISDS practice for the identification of 'key title' and with ISO Standards for title-word abbreviation)

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2 'Short title' *not* derived from ISDS.

NB: even though a locally constructed short title may have been prepared in accordance with the relevant ISO Standard, indicator 1 should not be used unless the title has been checked against ISDS lists.

3. *Examples*

```
(Example 1)

Key title:  "Teoreticheskaya i
             Ehksperimentalnaya Khimiya"

Abbreviated key title:  "Teor. Ehksp. Khim."

Contents of field AØ3:

Ø1ØØTeor.ØEhksp.ØKhim.
```

```
(Example 2)

Key title:  "Annals of Physics (New York)"

Abbreviated key title:  "Ann.Phys.(New York)"

Contents of field AØ3:

Ø1ØØAnn.ØPhys.Ø(NewØYork)
```

```
(Example 3)

Key title:  "Nature" (no abbreviated form)

Contents of field AØ3:

Ø1ØØNature
```

```
(Example 4)

Original title:  "Geophysical Journal of the
                  Royal Astronomical Society"

Locally constructed abbreviation:
                  "Geophys. J. R. Astron. Soc."

Contents of field AØ3:

Ø2ØØGeophys.ØJ.ØR.ØAstron.ØSoc.
```

AØ4: SERIES DESIGNATION

1. *Field definition*

Tag: AØ4
Indicators: Not used: entered as zeros
Subfields: Ø: Series designation
N: Notes
Repeatable: No

2. *Data description*

Field AØ4 is used to record a series designation which distinguishes between successive issues of the same serial title: i.e. a *chronological* series designation. It should not be confused with a series designation which differentiates between two or more parts published concurrently (e.g. 'Special Series'; 'Series A: Physics'); in the latter case the two parts will be distinguished by separate and unique serial codes and the series designation will be regarded as an integral part of the title, in accordance with ISDS practice.

A series designation may be alphabetic or mixed alphanumeric (e.g. 'New Series', 'Third Series', 'Series 2'). It should be entered as subfield Ø, in the original language and precise wording shown on the piece, if necessary transliterated in accordance with UNISIST recommendations.

A chronological series designation is seldom, if ever, an element which is absolutely required in order to distinguish between issues of a serial. This field is therefore regarded as optional.

3. *Example*

```
Series designation:  "New Series"

Contents of field AØ4:

ØØØØNewØSeries
```

AØ5: VOLUME NUMBER

1. *Field definition*

Tag: AØ5
Indicators: Not used: entered as zeros
Subfields: 1: 'Caption'
2: Volume number
3: Year: fixed length, four-digit number
4: Subdivision of volume
N: Notes
Repeatable: No

2. *Data description*

Field AØ5 is used to record a volume number, and any other information relating to the numbering of volumes or parts of volumes other than individual issues.

The field is divided into four subfields:

1 This subfield may be used if it is desired to enter a 'caption' (e.g. 'Vol', 'Tom', etc.). Captions should be entered exactly as given on the original, transliterated if necessary. Captions are regarded as an optional element.

2 This subfield is used to enter only the volume number itself, without 'captions' (e.g. 'Vol', 'v', 'Tom', 'Band'). If the volume number is numeric (whether arabic or roman, cardinal or ordinal) it should be entered as an arabic number without suffixes such as 'th', 'ème'. If the volume number is non-numeric, it should be entered exactly as given on the original, transliterated if necessary. If the volume number is a multiple number (e.g. 1-2), the two numbers should be entered in subfield 2, separated by a hyphen.

3 This subfield may be used to enter a "year used as volume number". The year is entered in full as a four-digit numeric. The year should also be included in field A21, as part of the date of issue.

4 This subfield is used to identify any part or subdivision of, or supplement to, a volume, other than an individual issue. Any entry made in the subfield should be in the original language and precise wording of the primary journal, transliterated if necessary.

Some journals carry a continuous volume number in spite of title changes, as well as a volume number referring to the present title, e.g. 'Tom XV (XLVI)'. In such cases, use only the number which refers to the present title.

Some journals carry a volume designation in the form '17th Year', '44e année'. If issues are numbered within these year numbers, enter the year number as 'volume number'. If a year number is given *as well as* another form of volume number, it may be ignored, and should not be entered in field AØ5.

3. *Examples*

```
(Example 1)
Volume number:  "Volume XVI"

Contents of field AØ5:
   ØØ●216   (without 'caption':  volume
            number converted to Arabic
            numerals and entered in
            subfield 2)
or ØØ●1Vol.●216  (with 'caption' entered
                  in subfield 1)
```

```
(Example 2)
Volume number not given:  issues numbered
within year:  "1971"

Contents of field AØ5:
ØØ●31971
```

AØ6: ISSUE OR PART NUMBER

1. *Field definition*

Tag: AØ6
Indicators: Not used: entered as zeros
Subfields: 1: 'Caption'
2: Issue No.
3: Subdivision of issue
N: Notes
Repeatable: No

2. *Data description*

Field AØ6 is used to record an issue or part number, and may refer to a serial issue or to a numbered part of a collection or series.

The field may be used to record a consecutive issue number or a volume issue number. A consecutive issue or part number is a number which either stands alone as a unique identification of an issue, or continues consecutively from one volume to another and/or from one year to another. A volume issue or part number is a number which recommences from 1 (or equivalent) at the beginning of each new volume, or at the beginning of each publication year if no volume number is used.

Where a serial issue carries both a consecutive issue number and a volume issue number, the volume issue number is to be preferred.

The field is divided into three subfields:

1 This subfield may be used if it is desired to enter a 'caption' (e.g. 'No.', 'n.', etc.). Captions should be entered exactly as given on the original, transliterated if necessary. Captions are regarded as an optional element.

2 This subfield is used to enter only the issue or part number itself, without 'captions' (e.g. 'No.', 'n.'). If the issue or part number is numeric (whether arabic or roman, cardinal or ordinal) it should be entered as an arabic number, without suffixes such as 'th', 'ème'. If the issue or part number is non-numeric, it should be entered exactly as given on the original, transliterated if necessary.

If the issue number is a multiple number (e.g. 1-2), the two numbers should be entered in subfield 2, separated by a hyphen.

3 This subfield is used to specify any part or subdivision of, or supplement to, an individual issue which is identified by an issue or part number. Any entry made in the subfield should be in the original language and precise wording of the primary journal, transliterated if necessary.

3. *Examples*

```
(Example 1)
Issue number:  "No. 8"

Contents of field AØ6:
   ØØ●28  (without 'caption':  issue number
          entered in subfield 2)
or ØØ●1No.●28  (with 'caption' entered in
                subfield 1)
```

```
(Example 2)
Issue identified as "Supplement to issue no. 8"

Contents of field AØ6:  ØØ●28●3Supplement
```

AØ7: OTHER IDENTIFICATION OF ISSUE OR PART

1. *Field definition*

Tag: AØ7
Indicators: Not used: entered as zeros
Subfields: Ø: Issue identification
N: Notes
Repeatable: No.

2. *Data description*

Field AØ7 is used:

(a) to record the distinctive title of a serial issue or part;

(b) to record the identification of an *unnumbered* serial issue or part;

(c) to record any other information which is required to identify a serial issue or part, and which cannot appropriately be entered under any of fields AØ4, AØ5 or AØ6.

For example, a special issue which appears outside the normal volume, volume issue or consecutive issue numbering sequence would be identified by a description given in this field. By contrast, a supplement to a numbered volume or a numbered issue would not be

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recorded here, but would be entered in subfield 4 in field AØ5 or subfield 3 in field AØ6.

The required title or other descriptive information should be entered in subfield Ø in the original language and precise wording of the piece, transliterated if necessary in accordance with UNISIST recommendations.

3. *Example*

```
Issue outside normal numbering sequence:

"Special Issue, June 1970"

Contents of field AØ7:

ØØ@Special¥Issue

(Date of issue would be entered in field A21,

and not field AØ7).
```

AØ8: TITLE OF CONTRIBUTION (ANALYTIC)

1. *Field definition*

Tag: AØ8
Indicators: Position 1 not used: entered as zero
Position 2 may take any of the values Ø, 1, 2, 3, 4
Subfields: 1: Title
2: Language code (optional)
N: Notes
Repeatable: Yes, if it is required to enter more than one form of title (e.g. parallel titles, original and translated titles)

Note that the definition of field AØ8 applies also to field AØ9 (TITLE OF MONOGRAPH), A1Ø (TITLE OF COLLECTION) and A3Ø (NAME OF MEETING).

2. *Data description*

Field AØ8 is used to enter the title of a contribution (paper, article letter, book chapter, etc.). It is used only for records at the *analytic* level; but note that the description given below applies also to fields AØ9, A1Ø and A3Ø.

The title should always be entered in full, including sub-titles and relevant footnotes.

The title may be entered exactly as given on the original, or it may be translated, transliterated or otherwise modified. The original piece may carry a single title, or parallel titles (e.g. in different languages); or a translated or transliterated title may appear on the piece in a 'less prominent' position (e.g. in a footnote).

To allow for various combinations of these cases to be entered unambiguously in a single record, the following conventions may be applied:

(a) Any title which appears on the piece is to be regarded as an 'original' title, even if the language or alphabet differs from that of the text.
(b) Any modification made by the cataloguer may be distinguished by the use of indicator position 2.
(c) Field AØ8 may be repeated, with the same or different indicators, to allow for the inclusion of parallel titles, or the original and a modified title.

The text of the title is entered in subfield 1, following accepted standards for capitalization and punctuation in the language concerned.

Indicators

Indicator position 2 should be used in accordance with the following table of values:

Ø Exact nature of title not specified
1 'Original' title: i.e. the title, or one of the titles, given on the piece, entered in the original language and alphabet.
2 Title in original language and alphabet, but modified in content as part of the cataloguing process.
3 Title transliterated or transcribed as part of the cataloguing process.
4 Title translated (with or without modification of content) as part of the cataloguing process.

Language of title

An additional subfield (subfield 2) is provided to enable a language code to be entered if the user so desires, in order to identify the language of the title where this differs from either the language of the document as given in field A23 or the language of the data base.

The language code should be derived from the relevant ISO Standard (in preparation): see Appendix B.

The use of subfield 2 is optional.

3. *Examples*

```
(Example 1)

Original title: "Exploratory experimental

studies comparing on-line and off-line

programming performance"

Modified title entered in field AØ8:

Ø2@1Comparing¥on-line¥and¥off-line¥

programming¥performance
```

```
(Example 2)

Original title:

ОРГАНИЗАЦИЯ▽КОНТРОЛЯ▽В▽АВТОМАТИЗИРОВАННОМ▽

СПРАВОЧНО-ИНФОРМАЦИОННОМ▽ЦЕНТРЕ▽ПО▽ЭЛЕКТРОТЕХНИКЕ

Transliterated title entered in field AØ8:

Ø3@1Organisatsiya¥k ntrolya¥v¥avtomatizirovannom¥

spravochno-inform sionnom¥tsentre¥po¥

ehlektrotekhnike

Translated title entered in field AØ8 (tag

repeated in same record):

Ø4@1Organisation¥of¥control¥at¥an¥automated¥

electrical¥engineering¥reference¥information¥

centre
```

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AØ9: TITLE OF VOLUME, MONOGRAPH OR PATENT DOCUMENT

1. *Field definition*

Tag: AØ9
Indicators: Position 1 not used: entered as zero
Position 2 may take any of the values Ø, 1, 2, 3, 4
Subfields: 1: Title
2: Language code (optional)
N: Notes
Repeatable: Yes, if it is required to enter more than one form of title (e.g. parallel titles, original and translated titles)

2. *Use of field AØ9*

Field AØ9 is used only for the title of an item at the monographic level, e.g.
(a) Book published as a single piece;
(b) Volume forming part of a series or collection of books;
(c) Patent document;
(d) Report;
(e) Thesis or dissertation.

It will be understood, however, that although field AØ9 always refers to a monographic item, it may occur in a record at the analytic level, for example when the record refers to a chapter in a book.

When used for the title of a patent document, field AØ9 is equivalent to ICIREPAT INID 54 (see Appendix E).

3. *Data description*

The format and content of field AØ9 follow the same conventions as for field AØ8.

A1Ø: TITLE OF COLLECTION

1. *Field definition*

Tag: A1Ø
Indicators: Position 1 not used: entered as zero
Position 2 may take any of the values Ø, 1, 2, 3, 4
Subfields: 1: Title
2: Language code (optional)
N: Notes
Repeatable: Yes, if it is required to enter more than one form of title (e.g. parallel titles, original and translated titles)

2. *Use of field A1Ø*

Field A1Ø is used only for the title of a *non-serial* collection.

Although field A1Ø always refers to a collection of items, it may occur in a record at the monographic or analytic levels, for example when the record refers to a single volume forming part of a collection, or to a chapter in a book which is itself part of a collection.

3. *Data description*

The format and content of field A1Ø follow the same conventions as for field AØ8.

A11: PERSON ASSOCIATED WITH A CONTRIBUTION

1. *Field definition*

Tag: A11
Indicators: Position 1 not used: entered as zero
Position 2 may take any of the values Ø, 1, 2, 3, 4, 5, 6, X
Subfields: 1: Name as derived from the piece
2: 'Established form': i.e. a 'correct' form of the name established by reference to an authority other than the piece to which the bibliographic record refers (optional element)
3: Real name (optional element)
4: Pseudonym (optional element)
5: Former name (optional element)
6: Subsequent name (optional element)
9: Rôle: a description in free form of the relationship between the person cited and the bibliographic item to which the record refers (optional element)
N: Notes
Repeatable: Yes: each different person to whom reference is made in the bibliographic record requires a separate repetition of field A11.

Note that the definition of field A11 applies also to fields A12 (PERSON ASSOCIATED WITH A MONOGRAPH), A13 (PERSON ASSOCIATED WITH A COLLECTION) and A34 (PERSON ASSOCIATED WITH A PATENT DOCUMENT).

2. *Use of field A11*

Field A11 is used to enter the name of a person who is associated with a contribution, as author, translator, illustrator etc.

Field A11 is used only for records at the *analytic* level.

Selection of names to be entered in the bibliographic record

(a) Authors:
The names of *all* individual authors associated with a given contribution are to be entered in the bibliographic record, unless there is a clear indication on the original that the chief responsibility for the contribution lies with only one (or less than all) of the persons cited as authors, in which case only those indicated as chief contributors are to be entered. See Example 1.

(b) Other persons associated with a contribution:
Provision has been made to enter the names of persons associated with a contribution, other than the authors; but these are not regarded as essential elements in the bibliographic description.

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(Example 1)

Authorship as shown on the piece:

"By Richard P. Wendt, Mohammed Shamin, Loyola University, New Orleans, Louisiana, for Office of Saline Water, C.M. Wong, Director; W. Sherman Gilliam, Assistant Director, Research; W.H. McCoy, Chief, Chemical Physics Division".

Contents of personal name fields:

First author: ∅1∅1Wendt,∮Richard∮P.

or ∅1∅1Wendt,∮R.P.

Second author: ∅1∅1Shamin,∮Mohammed

or ∅1∅1Shamin,∮M.

(see below for details of indicators and subfield codes)

Other names cited in this example are not to be entered as authors.

3. *Data description (all 'personal name' fields)*

This section is applicable to fields A11, A12, A13 and A34, except where otherwise noted.

Indicators

Indicator position 2 is used to define the relationship between the person whose name has been entered in the bibliographic record, and the item to which the record refers. Most commonly, this relationship will be that of *author* or *editor*, but provision is made for other possibilities, in accordance with the table* below:

∅ Relationship not specified (may be any of those listed below)
1 Author
2 Editor
3 Compiler
4 Translator
5 Illustrator
6 Preface or introduction by
X Other (specifically *not* one of those listed above)

Subfields

The field structure for personal names provides a number of subfields (1 to 6) for entering alternative forms of an author name. Any of the following forms may be included (but only subfield 1 is an essential element):

1. *Name as derived from the piece*, unaltered except for transliteration if necessary. It is also permissible to enter here a name in which an initial has been expanded to a full forename (by reference to an authority file), or forenames replaced by initials, provided the name has not otherwise been altered.

* This table of indicator values applies to fields A11, A12 and A13, but not to field A34 (q.v.)

2. *'Established form'* of the name, derived from an authority file, where this differs from the form given in the primary publication by something more than the substitution of a forename for an initial, or vice-versa. An example would be where a non-Russian name has been transliterated into Cyrillic, and when retransliterated in accordance with UNISIST recommendations, it emerges in an incorrect form (e.g. 'Courtois' - 'Kurtoa'). It is important to retain under subfield 1 the form derived directly from the primary publication, since users may not know the original form of the name.
3. *'Real name'*, where the name given on the piece (and recorded under subfield 1) is a pseudonym.
4. *'Pseudonym'*, where the individual whose real name is given on the piece (and recorded under subfield 1) is known to have published under another name.
5. *'Former name'* where a change of name is known to have occurred, e.g. maiden name for a married woman author, or former name if the person cited actually changed the name by which he was known, for example on moving to take up residence in another country.
6. *'Subsequent name'* where a change of name is known to have occurred, e.g. married name for a woman author writing under her maiden name, or subsequent name if the author later changed the name by which he was known at the time of writing the item in question.

Subfield 9 is used as follows:

9. *'Rôle'*: in the event that the relationship between the person cited and the bibliographic item cannot be adequately defined by any of the specific indicators listed above, this subfield may be used to enter a free-form description of the relationship.

Elements in a personal name

The conventions described under this and subsequent sections apply equally to any of subfields 1 to 6, except as otherwise noted.

The elements in an individual name may be defined as follows:

'Key' name or names	'K'
Forename and/or initials	'F'
Suffix	'S'
Title	'T'

All names are to be entered in the following form:

K,∮F,∮S∮(T)

Commas are used to separate the 'key' names (surnames) from the forename and/or initials, and to separate the forenames from any suffix (such as 'Jr', 'III'). A title, if required, is entered in parentheses at the end of the name. For example:

'Rutherford (Lord)'
'Rutherford, James D., Jr.'
'Rutherford, J.D.'

'Key' names

The 'key name' element (K) corresponds to the surname in a Western name. The term 'key name' is used rather than 'surname', however, since there may be occasions when it is not clear that the content of this element really represents a surname in the Western sense. (Also, it is envisaged that there may be an exact

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correspondence between 'K' elements and entry points, or 'keys', in a printed author index). There may be more than one 'K' element if the surname is a compound one (e.g. 'Martinez Moreno'), or in the case of certain oriental names where there is real doubt about which component is the surname.

The 'K' element is always an essential element, except in some names consisting only of a religious title and forename(s) (e.g. 'Sister Mary Hilda').

Forename and/or initials

The 'F' element is an essential element unless the fullest available form of the name comprises only a surname and a title, or unless all components of the name are treated as key names.

If one or more forenames are given in full, the first (or second if the individual is generally known by the second forename) may be retained and all others reduced to the initial(s).

If the fullest form of the name on the original gives only initials for the forenames, the first forename may be entered as an initial, or may be spelled out in full if this information is readily and unambiguously available from existing reference works (previous indexes, directories, biographical dictionaries, etc.).

If a forename appears in abbreviated form (e.g. 'Chr.', 'Jas.'), the abbreviation may be retained and entered in the 'F' element:

(Example 2)

Authorship as shown on the piece:

"DR. F. GROSS und TH. BECK"

Contents of personal name fields:

First author: ∅1●1Gross,∅F.

Second author: ∅1●1Beck,∅Th.

If a hyphenated forename is reduced to initials, the initial letters of both parts are to be retained, linked by a hyphen (e.g. 'Jean-Paul' gives 'J.-P.').

Suffixes

The 'S' element is used to enter "suffixes" such as 'Jr.', 'II', etc. Any such suffix is to be retained as an essential element. Some examples are given below:

English:	Jr., Sr., II, III
Spanish:	hijo, nieto
Portuguese:	filho, neto, sobrinho
Hungarian:	ifj., id.
Russian:	ml.

(Example 3)

Authorship as shown on the piece:

"BY F.S. HARRIS, JR., The Aerospace Corporation, P.O. Box 95085, Los Angeles, Calif. 90045"

Contents of personal name field:

∅1●1Harris,∅F.S.,∅Jr.

Suffixes representing titles, or professional or academic qualifications, are not normally entered: see below.

Titles and qualifications

The 'T' element may be used in a few special circumstances to enter a title which forms part of a person's name. In general, however, titles are omitted from names entered in bibliographic descriptions. Detailed rules are suggested as follows:

Academic, professional, religious or military titles preceding the name (such as 'Dr.', 'Ing.', 'Rev.', 'General', etc.), and titles or qualifications following the name, are omitted from bibliographic descriptions:

(Example 4)

Authorship as shown on the piece:

"Ing. STEFANIA BAICU"

Contents of personal name field:

∅1●1Baicu,∅Stefania

or ∅1●1Baicu,∅S.

'Mr.', 'M.', 'Mrs.', 'Mme.', and their equivalents in other languages are normally omitted. 'Mrs.', 'Mme.', etc., may be retained for married women authors when only the husband's fornames or initials are given in the original; e.g. 'Mrs. John J. Doe':

(Example 5)

Authorship as shown on the piece:

"Note de MM. JEAN-MARC DESRUMAUX, JEAN-MICHEL ROUVAEN et Mme CLAUDE MORIAMEZ, présentée par M. René Lucas"

Contents of personal name fields:

First author: ∅1●1Desrumaux,∅Jean-Marc

or ∅1●1Desrumaux,∅J.-M.

Second author: ∅1●1Rouvaen,∅Jean-Michel

or ∅1●1Rouvaen,∅J.-M.

Third author: ∅1●1Moriamez,∅Claude∅(Mme.)

or ∅1●1Moriamez,∅C.∅(Mme.)

The title "Mme." is included since the name given is that of the husband (but this particular example could be ambiguous: 'Claude' in French is both masculine and feminine). Note also the contraction of hyphenated forenames, and the fact that the person cited as 'presenting' the paper is not included as an author.

'Miss', 'Mlle.', 'Ms.' and their equivalents in other languages are omitted unless only the surname is given:

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(Example 6)

Authorship as shown on the piece:

"Note de Mlle. EDITH DEVIN et. M. ROBERT LOCQUENEUX, présentée par M. Louis de Broglie"

Contents of personal name fields:

First author: ∅1●1Devin,∅Edith

or ∅1●1Devin,∅E.

Second author: ∅1●1Locqueneux,∅Robert

or ∅1●1Locqueneux,∅R.

Terms which indicate affiliation with religious orders (e.g. Sister, Brother) are not retained unless only the forename(s) are given:

(Example 7)

Authorship as given on the piece:

"Sister Helen Therese Nyberg, O.P."

Contents of personal name field:

∅1●1Nyberg,∅Helen∅T.

or ∅1●1Nyberg,∅H.T.

Honorific titles are normally omitted, but may be retained if they constitute an indispensable part of the name:

(Example 8)

Authorship as given on the piece:

"LORD TODD"

Contents of personal name field:

∅1●1Todd∅(Lord)

Spelling

Individual author names are to be entered in the vernacular, as they appear on the original piece, except:

(a) If transliteration from a non-roman alphabet to roman alphabet is required, UNISIST recommended transliteration schedules are to be used.

(b) If an 'established form' of the name is known to the originator of the bibliographic description, and if this form differs from what has been derived from the original, then the 'established form' may be entered in subfield 2.

This is particularly likely to arise where a non-Russian name is transliterated into Cyrillic for publication in a Russian journal, and is subsequently re-transliterated to the roman alphabet.

In all cases, the name as given on the piece (transliterated if necessary) should be regarded as the primary form for entry in a bibliographic description, since the use of the 'established form' depends on prior knowledge which may not be accessible to all users of a bibliographic data base. Subfield 1 should always carry the name as derived from the piece.

(Example 9)

Authorship as shown on the piece:

"St. BOYADJIEW"

In this case a known alternative (and preferred) transliteration exists: "Boyadzhiev"

Contents of personal name field:

∅1●1Boyadjiew,∅St.●2Boyadzhiev,∅St.

Surname prefixes

All surname prefixes are retained in personal author names. A prefix and the name to which it is affixed are together regarded as forming a single 'key' name. Examples of frequently used prefixes are:

van	la	lo	van der
von	della	du	vander
de	le	des	
da	del	de la	

See note below on "Special symbols used in author names", and examples given in that section.

Compound surnames

Compound surnames are the rule for most Spanish and Portuguese authors, and are occasionally found among almost all nationalities.

If the surname is a compound containing a hyphen (e.g. 'Litvak-Gorskaya, L.B.'), the whole compound name should be entered as a single 'key' name.

If it is apparent that the surname is a compound which is not hyphenated, both names should be entered as 'key' names, (e.g. 'J. Hunter Dunn'). If in doubt, enter only the final element as a 'key' name and treat the first element as a forename.

Names that indicate marital status

In certain languages a married woman author's name is the same as her husband's with the addition of one or more letters, or a different word-ending. For example, in Hungarian the suffix '-ne' may be applied to either a forename or a surname. Names of this kind should be entered exactly as they appear on the contribution without modification, and in accordance with the rules previously defined:

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(Example 10)

Authorship as shown on the piece:

"GYORGY KAROLYNE, Dr."

Contents of personal name field:

Ø1●1Karolyne,ØGyorgy

or Ø1●1Karolyne,ØG.

(Note also omission of academic title)

Names where 'forename' and 'surname' are not readily identifiable

In practice, particularly with oriental names, there may be many cases where it is not possible to determine with assurance which of two or three names is really the surname. In this event, it is recommended that two or more elements may be treated as 'key' names, entered in the sequence given on the contribution, and used to generate cross-references in author indexes, if desired.

Examples: 'Teh Fu Yen', 'Krishna Mohana Rao' (*or* 'Mohana Rao, Krishna').

Special symbols used in personal names

Two special symbols may occur in personal names as entered in accordance with UNISIST recommendations. They have been introduced in order to make it possible to deal with certain problems which arise in the production of author indexes and other listings when an author has a complex surname or one which includes prefixes or abbreviations. Their use is in no way mandatory, but they have been defined in such a way that it will be possible for services which exchange bibliographic records to leave all options open for the recipient of an exchange tape to apply whatever conventions he may wish in deriving author indexes from the machine file.

The two symbols are '=' and '+'. Both are to be regarded as 'space' for purposes of display and search matching.

= The connective '=' is intended to be used to link a prefix to the name to which it is affixed and to indicate that the following character is the beginning of a 'strong' component of the name, i.e. one which may (depending on the policy of the individual service) be used as a key for creating an index entry or cross-reference.

Examples: 'Teilhard de=Chardin'
'von=Dorrien'

+ The connective '+' is intended to be used to link components of a compound surname and to indicate that the following character is the beginning of a 'weak' component of the name, i.e. one which should never be used as a key for creating an index entry or cross-reference.

Examples: 'Gonzales+G.,R.'
'Asin+y Cabreza, M.D.'
'van+der=Avoird,A.'

The remaining examples illustrate the various possibilities which arise when dealing with compound names, and names involving prefixes. Although the *Reference Manual* leaves certain options open, it would be expected that any individual service, or the parties to an exchange of bibliographic data, would adopt a single coherent policy across the whole of their data base.

(Example 11)

Authorship as shown on the piece:

"AD VAN DER AVOIRD"

Contents of personal name field:

Ø1●1van+der=Avoird,ØAd

or Ø1●1vanØderØAvoird,ØAd

or Ø1●1van+der=Avoird,ØA.

or Ø1●1vanØderØAvoird,ØA.

(Example 12)

Authorship as shown on the piece:

"Note de MM. MICHEL BRUNEL et FRANCOIS DE BERGEVIN, transmise par M. Louis Néel".

Contents of personal name fields:

First author: Ø1●1Brunel,ØMichel

Second author: Ø1●1de=Bergevin,ØFrancois

or Ø1●1deØBergevin,ØFrancois

Alternatively:

First author: Ø1●1Brunel,ØM.

Second author: Ø1●1de=Bergevin,ØF.

or Ø1●1deØBergevin,ØF.

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(Example 13)

Authorship as shown on the piece:

"DEREK J. DE SOLLA PRICE"

Contents of personal name field:

Ø1Ø1de=Solla␣Price,␣Derek␣J.

or Ø1Ø1de␣Solla␣Price,␣Derek␣J.

or Ø1Ø1de=Solla␣Price,␣D.J.

or Ø1Ø1de␣Solla␣Price,␣D.J.

(Example 14)

Authorship as shown on the piece:

"LUIS RIVERA OYOLA and R.A.LEE"

Contents of personal name fields:

First author: Ø1Ø1Rivera␣Oyola,␣Luis

or Ø1Ø1Rivera␣Oyola,␣L.

Second author: Ø1Ø1Lee,␣R.A.

Note on multiple authors and affiliations

There are two obvious approaches for dealing with the problem of entering a theoretically unlimited number of individual names in a single record:

(a) to allow unlimited repetition of subfields;
(b) to allow unlimited repetition of personal name fields.

The second alternative has been recommended, for the following overriding reason. UNISIST proposals for authors' affiliation call for only a single affiliation to be entered as the minimum requirement in a bibliographic record, but it is recognized that some systems may want to enter all, or a larger number, of affiliations. In this case, it is essential that the record and field format should be hospitable to a convenient means of linking individual names and their affiliations. It is suggested that this can best be done by repeating personal name and affiliation fields as many times as are required, and using indicator position 1 to link related names and affiliations.

A12: PERSON ASSOCIATED WITH A MONOGRAPH

1. *Field definition*

Tag: A12
Indicators: Position 1 not used: entered as zero (but see note at end of section on field A11)
Position 2 may take any of the values Ø, 1, 2, 3, 4, 5, 6, X
Subfields: 1, 2, 3, 4, 5, 6, 9, N (see field A11 for definition of subfields)
Repeatable: Yes: each different person to whom reference is made in the bibliographic record requires a separate repetition of field A12

2. *Use of field A12*

Field A12 is used to enter the name of a person who is associated with an item at the monographic level, e.g.

(a) Book published as a single piece;
(b) Volume forming part of a series or collection of books;
(c) Report;
(d) Thesis or dissertation.

Field A12 is *not* used in connexion with patent documents, since these require a separate treatment of the 'author' relationship: see field A34 (PERSON ASSOCIATED WITH A PATENT DOCUMENT).

Although field A12 always refers to a monographic item, it may occur in a record at the analytic level, for example when the record refers to a chapter of a book.

Selection of names to be entered in the bibliographic record

(a) Authors:
The names of all individual authors associated with a given item at the monographic level are to be entered in the bibliographic record, unless there is a clear indication on the original that the chief responsibility for authorship lies with only one (or less than all) of the persons cited, in which case only those indicated as chief contributors are to be entered. See Example 1 under field A11.

(b) Other persons associated with a monograph:
Provision has been made to enter the names of persons associated with a monograph, other than the authors. These may include: editor, compiler, translator, illustrator, author of preface or introduction. None of these was specifically identified as 'essential' during the discussions of the Working Group on Bibliographic Descriptions, but it is expected that for monographic items it would be normal practice to regard editors' names as an essential element, and most others as optional.

The relationship ('author', 'editor', etc.) between the person named and the bibliographic item is defined by a code in indicator position 2: see field A11.

3. *Data description*

See field A11.

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A13: PERSON ASSOCIATED WITH A COLLECTION

1. *Field definition*

Tag: A13
Indicators: Position 1 not used: entered as zero (but see note at end of section on field A11)
Position 2 may take any of the values Ø, 1, 2, 3, 4, 5, 6, X
Subfields: 1, 2, 3, 4, 5, 6, 9, N (see field A11 for definition of subfields)
Repeatable: Yes: each different person to whom reference is made in the bibliographic record requires a separate repetition of field A13

2. *Use of field A13*

Field A13 is used to enter the name of a person who is associated with a *non-serial* collection.

Although field A13 always refers to a collection of items, it may occur in a record at the monographic or analytic levels, for example when the record refers to a single volume forming part of a collection, or to a chapter in a book which is itself part of a collection.

Selection of names to be entered in the bibliographic record

(a) Authors:
The names of all individual authors associated with a given item at the collective level are to be entered in the bibliographic record, unless there is a clear indication on the original that the chief responsibility for authorship lies with only one (or less than all) of the persons cited, in which case only those indicated as chief contributors are to be entered. See Example 1 under field A11.

(b) Other persons associated with a collection:
Provision has been made to enter the names of persons associated with a collection, other than the author. These may include: editor, compiler, translator, illustrator, author of preface or introduction. None of these was specifically identified as 'essential' during the discussions of the Working Group on Bibliographic Descriptions, but it is expected that for collective items it would be normal practice to regard editors' names as an essential element, and most others as optional.

The relationship ('author', 'editor', etc.) between the person named and the bibliographic item is defined by a code in indicator position 2: see field A11.

3. *Data description*

See field A11.

A14: AFFILIATION – CONTRIBUTION

1. *Field definition*

Tag: A14
Indicators: Not used: entered as zeros
Subfields: 1: Name of organization
2: Address or location
3: Country code (optional element): fixed length, two or three characters depending on the code adopted
N: Notes
Repeatable: No
Note that the definition of field A14 applies also to fields A15 (AFFILIATION – MONOGRAPH) and A16 (AFFILIATION – COLLECTION).

2. *Use of field A14*

Field A14 is used to enter the name and address of a single organization to which one or more of the individuals cited as authors of a contribution are affiliated. It may only be used in a record in which field A11 occurs at least once: i.e. where at least one person has been cited as associated with the contribution.

Field A14 is used only for records at the *analytic* level.

3. *Data description*

This section is applicable to fields A14, A15 and A16.

Subfields

1 *Name of organization.* Where several levels of the organization are cited (e.g. laboratory, faculty, university), they should be entered in descending order of scale, from the larger unit to the smaller. For large and complex organizations, such as some university or government departments, discretion may be exercised in omitting intermediate levels, the inclusion of which does not add significant information to the entry, provided always that the most specific unit is cited and that the entry provides an unambiguous identification of the organization:

```
(Example 1)

Affiliation as shown on the piece:

"Lubrication Research Laboratory,

Department of Mechanical Engineering,

School of Engineering and Applied Science,

Columbia University, New York NY10027"

Contents of affiliation field (subfield 1):

   ØØ▪1Columbia␣University,␣Lubrication␣

   Research␣Laboratory

or ØØ▪1Columbia␣Univ.,␣Lubr.␣Res.␣Lab.
```

The name of the organization should be entered in the language of the piece (unless the name shown on the piece is itself a translation and the name in its original language is known, in which case the latter form may be entered). The following conventions apply:

(a) If transliteration is required, UNISIST recommended transliteration schedules are to be used.
(b) A fuller form of the name than that given on the piece may be entered if known.
(c) If the organization is customarily known by its initials or an acronym ('IBM', 'ASLIB'), this short form may be entered in place of a fuller name given on the piece.

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(d) Words may be abbreviated in accordance with UNISIST recommendations.

2 *Address of organization.* The address or location of the organization should be entered in subfield 2. The address should be entered in the fullest available form, ignoring any redundancy which may arise where the place name forms part of the name of the organization (e.g. 'Cambridge University, Cambridge, England'). However, an incomplete address may be entered where no fuller information is available.

3 *Country code.* The country of the affiliation may optionally be entered in subfield 3, using an ISO Standard country code (see Appendix A).

(It will be noted that the option is deliberately left open for country names to be entered 'informally' as part of the address, or to be encoded in a specific subfield if there is a requirement that a file be searchable automatically by country. It is expected that any individual service, or parties to an exchange, would adopt a consistent policy across the data base concerned.)

Selection of the affiliation

The minimum requirement for a bibliographic citation is considered to be the inclusion of a single organizational affiliation, selected wherever possible as giving the location where the work described in the piece was done. The rules on following pages are intended to aid selection of a single affiliation in cases where this criterion cannot readily be applied by reference to the information given on the piece.

(a) One author: only one address given. This address is to be entered:

(Example 2)

Authorship as shown on the piece:

"THOMAS C. LOWE
Informatics Inc., Bethesda, Maryland"

Contents of affiliation field:

ØØ●1Informatics␣Inc.●2Bethesda,␣Maryland●31Ø1

or ØØ●1Informatics␣Inc.●2Bethesda,␣Maryland●3USA

or ØØ●1Informatics␣Inc.●2Bethesda,␣Maryland,␣USA

(b) One author: several addresses given. One address only is to be selected, in accordance with the following descending sequence of preferences: location where the work was done; author's affiliation at the time of the work; first organization cited:

(Example 3)

Authorship as shown on the piece:

"JESSE H. KATZ*
International Business Machines Corp.,
Los Angeles, Calif.
*Present address: Computer Processes, Inc., 10889 Wilshire Blvd., Los Angeles, Calif."

Contents of affiliation field:

ØØ●1IBM␣Corp.●2Los␣Angeles,␣Ca.●31Ø1

or ØØ●1IBM␣Corp.●2Los␣Angeles,␣Ca.●3USA

or ØØ●1IBM␣Corp.●2Los␣Angeles,␣Ca.,␣USA

(c) More than one author: only one address given. This address is to be entered:

(Example 4)

Authorship as shown on the piece:

"STANLEY R. PETRICK, PAUL M. POSTAL AND PETER S. ROSENBAUM, IBM Thomas J. Watson Research Center, Yorktown Heights, New York".

Contents of affiliation field:

ØØ●1IBM␣Corp.,␣Thomas␣J.␣Watson␣Research␣Center●2Yorktown␣Heights,␣NY●31Ø1

or ØØ●1IBM␣Corp.,␣Thomas␣J.␣Watson␣Research␣Center●2Yorktown␣Heights,␣NY●3USA

or ØØ●1IBM␣Corp.,␣Thomas␣J.␣Watson␣Research␣Center●2Yorktown␣Heights,␣NY,␣USA

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(d) More than one author: several addresses, but not more than one for any single author. The address given for the first author is to be entered, unless it is a private address and an organizational affiliation is given for another author (in which case enter the first such affiliation):

(Example 5)

Authorship as shown on the piece:

"RONALD L. GUE, JOHN C. LIGGETT
Southern Methodist University,* Dallas,
Texas AND
KENNETH C. CAIN
Ernst and Ernst, Atlanta, Georgia.
*Computer Sciences Center"

Contents of affiliation field:

ØØ●1Southern␣Methodist␣Univ.,␣Comput.␣Sci.␣Cent.●2Dallas,␣Texas●3ı Øı

or ØØ●1Southern␣Methodist␣Univ.,␣Comput.␣Sci.␣Cent.●2Dallas,␣Texas●3USA

or ØØ●1Southern␣Methodist␣Univ.,␣Comput.␣Sci.␣Cent.●2Dallas,␣Texas,␣USA

(e) More than one author: several addresses and more than one for an individual author. One address only is to be selected, in accordance with the following descending sequence of preferences: location where the work was done; first author's affiliation at the time of the work; first organization cited:

(Example 6)

Authorship as shown on the piece:

"R. GALIMBERTI* AND U. MONTANARI**
Istituto di Elettrotecnica e di Elettronica,
Politecnico di Milano, Italy.
*Present address: LABEN, Laboratori
Elettronici e Nucleari S.p.A., Milano, Italy.
**Present address: Istituto di Elaborazione
dell'Informazione, Consiglio Nazionale
delle Richerche, Pisa, Italy."

Contents of affiliation field:

ØØ●1Politec.␣Milano,␣Ist.␣Elettrotec.␣Elettron.●2Milano●339Ø

or ØØ●1Politec.␣Milano,␣Ist.␣Elettrotec.␣Elettron.●2Milano●3ITA

or ØØ●1Politec.␣Milano,␣Ist.␣Elettrotec.␣Elettron.●2Milano,␣Italy

(Example 7)

Authorship as shown on the piece:

"Aus der Medizinischen Universitätsklinik
(Ludolf-Krehl-Klinik) Heidelberg (Direktor:
Prof. Dr. G. Schettler) und dem Institut
für Zytologie und Elektronenmikroskopie
der Universität des Saarlandes, Homburg,
(Direktor: Prof. Dr.H.Sitte)
TH. PFLEIDERER, E. MORGENSTERN und
E. WEBER"

(In this case it is not clear what relationship exists between the two organisations cited and the three individuals named as authors. The first-named organisation is therefore selected).

Contents of affiliation field:

ØØ●1Med.␣Universitätsklinik␣(Ludolf-Krehl-Klinik)●2Heidelberg●3349

or ØØ●1Med.␣Universitätsklinik␣(Ludolf-Krehl-Klinik)●2Heidelberg●3DEU

or ØØ●1Med.␣Universitätsklinik␣(Ludolf-Krehl-Klinik)●2Heidelberg,␣W.␣Germany

(f) An individual's private address is never entered unless it is the *only* address available on the original: in this event, subfield 1 is omitted:

(Example 8)

Authorship as shown on the piece:

"DWARIKA NATH MISRA
19 Elwern Road, Arlington, Massachusetts
Ø2174"

Contents of affiliation field:

ØØ●219␣Elwern␣Road,␣Arlington,␣Mass.␣Ø2174●31Øı

or ØØ●219␣Elwern␣Road,␣Arlington,␣Mass.␣Ø2174●3USA

or ØØ●219␣Elwern␣Road,␣Arlington,␣Mass.␣Ø2174,␣USA

Multiple affiliations

It is recognized that some services will wish to enter more than one affiliation. To avoid confusion, it is recommended that

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(a) Fields A14, A15 and A16 should not be used for this purpose.
(b) Locally-assigned, repeatable field tags should be allocated to differentiate between 'address at the time of the work', 'present address', etc.
(c) Indicator position 1 should be used to link personal names and the related affiliations.
(d) Fields A14, A15 and A16 should be reserved for the 'preferred' affiliation as defined in this section. Where necessary, the 'preferred' affiliation would be derivable by algorithm from the entries made in locally-assigned fields.

See also the note on multiple authors and affiliations at the end of the section on field A11.

A15: AFFILIATION – MONOGRAPH

1. *Field definition*

Tag: A15
Indicators: Not used: entered as zeros
Subfields: 1: Name of organization
2: Address or location
3: Country code (optional element): fixed length, two or three characters (alphabetic or numeric, depending on the code adopted)
N: Notes
Repeatable: No

2. *Use of field A15*

Field A15 is used to enter the name and address of a single organization to which one or more of the individuals cited as authors (or editors, etc.) of a monograph are affiliated. Monographic items include:
(a) Book published as a single piece;
(b) Volume forming part of a series or collection of books;
(c) Report;
(d) Thesis or dissertation.

Field A15 is *not* used for the affiliation of individuals associated with a patent document.

Although field A15 always refers to a monographic item, it may occur in a record entered at the analytic level, for example when the record refers to a chapter in a book.

3. *Data description*

See field A14.

A16: AFFILIATION – COLLECTION

1. *Field definition*

Tag: A16
Indicators: Not used: entered as zeros
Subfields: 1: Name of organization
2: Address or location
3: Country code (optional element): fixed length, two or three characters (alphabetic or numeric, depending on the code adopted)
N: Notes
Repeatable: No

2. *Use of field A16*

Field A16 is used to enter the name and address of a single organization to which one or more of the individuals cited as authors (or editors, etc.) of a *non-serial* collection are affiliated.

Although field A16 always refers to persons associated with the authorship of a collective item, it may occur in a record at the monographic or analytic levels, for example when the record refers to a single volume forming part of a collection, or to a chapter in a book which is itself part of a collection.

3. *Data description*

See field A14.

A17: CORPORATE AUTHOR (CONTRIBUTION)

1. *Field definition*

Tag: A17
Indicators: Not used: entered as zeros
Subfields: 1: Name of corporate author
2: Address of corporate author (optional element)
3: Country code (optional element): fixed length, two or three characters depending on the code adopted
N: Notes
Repeatable: Yes: if there is more than one corporate author associated with a contribution, each one cited in the bibliographic record requires a separate repetition of field A17.

Note that the definition of field A17 applies also to fields A18 (CORPORATE AUTHOR – MONOGRAPH), A19 (CORPORATE AUTHOR – COLLECTION) and A35 (CORPORATE BODY ASSOCIATED WITH A PATENT DOCUMENT).

2. *Use of field A17*

Field A17 is used to enter the name and, optionally, the address and country of a corporate author of a contribution (paper, article, letter, book chapter, etc.)

Field A17 is used only for records at the *analytic* level. Where more than one corporate author is cited in connexion with a contribution, field A17 may be repeated as many times as required.

3. *Data description (all 'corporate author' fields)*

Subfields

1 *Name of corporate author.* Where several levels of the organization are cited (e.g. laboratory, faculty, university), they should be entered in descending order of scale, from the larger unit to the smaller. For large and complex organizations, such as some university or government departments, discretion may be exercised in omitting intermediate levels, the inclusion of which does not add significant information to the entry, provided always that the most specific unit is cited and that the entry provides an unambiguous identification of the organization:

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(Example 1)

Corporate author as shown on the piece:

"US Department of the Army, Harry Diamond Laboratories"

Contents of corporate author field (subfield 1):

ØØ●1US␣Dept.␣of␣the␣Army,␣Harry␣Diamond␣Laboratories

The names of a corporate author should be entered in the language of the piece (unless the name shown on the piece is itself a translation, and the name in its original language is known, in which case the latter form may be entered). The following conventions also apply:

(a) If transliteration is required, UNISIST recommended transliteration schedules are to be used.
(b) A fuller form of the name than that given on the piece may be entered if known.
(c) If the organization is customarily known by its initials or an acronym ('IBM', 'ASLIB'), this short form may be entered in place of a fuller name given on the piece.
(d) Words may be abbreviated in accordance with UNISIST recommendations.

(Example 2)

Corporate author as shown on the piece:

"Royal Institute of Technology Library Stockholm"

Contents of corporate author field:

ØØ●1Royal␣Institute␣of␣Technology␣Library●2Stockholm

or ØØ●1Kungliga␣Tekniska␣Hogskolans␣Bibliotek●2Stockholm

(original language)

An abbreviated form would also be legitimate, e.g.:

ØØ●1K.␣Tek.␣Hogsk.␣Bibl.●2Stockholm

2 *Address of corporate author.* The address or location of the corporate author may optionally be entered in subfield 2: and it is recommended that it should be so entered if the name of the organization alone is not sufficient for unambiguous identification, as in Example 2. If the country is given in the form of a code in subfield 3, it should *not* be included in subfield 2.

3 *Country code.* The country of the corporate author may optionally be entered in subfield 3, using an ISO Standard country code (see Appendix A).

(It will be noted that the option is deliberately left open for country names to be entered 'informally' as part of the address, or to be encoded in a specific subfield if there is a requirement that a file be searchable automatically by country. It is expected that any individual service, or parties to an exchange, would adopt a consistent policy across the data base concerned.)

A18: CORPORATE AUTHOR – MONOGRAPH

1. *Field definition*

Tag: A18
Indicators: Not used: entered as zeros
Subfields: 1: Name of corporate author
2: Address of corporate author (optional element)
3: Country code (optional element): fixed length, two or three characters (alphabetic or numeric, depending on the code adopted)
N: Notes
Repeatable: Yes: if there is more than one corporate author associated with a monograph, each one cited in the bibliographic record requires a separate repetition of field A18.

2. *Use of field A18*

Field A18 is used to enter the name and, optionally, the address and country of a corporate author associated with an item at the monographic level, e.g.

(a) Book published as a single piece;
(b) Volume forming part of a series or collection of books;
(c) Report.

Field A18 is *not* used for corporate bodies associated with a patent document: see field A35.

Although field A18 always refers to a monographic item, it may occur in a record entered at the analytic level, for example when the record refers to a chapter in a book.

Where more than one corporate author is cited in connexion with a monographic item, field A18 may be repeated as many times as required.

3. *Data description*

See field A17.

A19: CORPORATE AUTHOR – COLLECTION

1. *Field definition*

Tag: A19
Indicators: Not used: entered as zeros
Subfields: 1: Name of corporate author
2: Address of corporate author (optional element)

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3: Country code (optional element): fixed length, two or three characters (alphabetic or numeric, depending on the code adopted)
N: Notes

Repeatable: Yes: if there is more than one corporate author associated with a collection, each one cited in the bibliographic record requires a separate repetition of field A19.

2. *Use of field A19*

Field A19 is used to enter the name and, optionally, the address and country of a corporate author associated with a *non-serial* collection.

Although field A19 always refers to a collection of items, it may occur in a record at the monographic or analytic levels, for example when the record refers to a single volume forming part of a collection, or to a chapter in a book which is itself part of a collection.

Where more than one corporate author is cited in connexion with a non-serial collection, field A19 may be repeated as many times as required.

3. *Data description*

See field A17.

A20: PAGE NUMBERS

1. *Field definition*

Tag: A20
Indicators: Not used: entered as zeros
1: Page numbers
2: 'Page fragment': numeric only
3: Additional information
N: Notes
Repeatable: No

2. *Data description*

Field A20 is used to enter the page numbers of an individual contribution (e.g. a journal article or a paper in a conference proceedings). 'Page numbers' may be represented by a single number if the contribution is contained entirely within one page; or by first and last page numbers if the contribution occupies a continuous 'run' of pages; or by a string of single numbers and/or pairs of numbers in the case of discontinuous pagination.

Field A20 occurs only in records at the *analytic* level.

Subfields

1 *Page numbers.* Subfield 1 is used to enter the page numbers as described above. The numbers should be entered exactly as given on the piece, transliterated if necessary where letters are used as part of the page number. If roman numerals are used, they should not be converted into arabic numerals, since the distinction may often be significant within a single publication.

All numbers (including first and last numbers of a sequence such as 1234-1235) should be entered in full. A hyphen is used to separate the first and last page numbers of a continuous sequence. Commas are used to separate individual page numbers or pairs of numbers where pagination is discontinuous, as '27-40, 44, 46-57, 53, 55'. Note that ambiguity could occur if the page numbering on the piece included hyphens (if pages were numbered within chapters or issues as 123-41, 123-42, 123-43, etc.). In such a case it is recommended that these hyphens be changed to full points (as 123.41, 123.42, etc.).

2 *'Page fragment number'.* Subfield 2 is used to define a 'page fragment' if several short contributions are contained within a single page, or several contributions begin on a single page. The contents of subfield 2 will always be taken as modifying the first page number cited in subfield 1. When several contributions begin on a single page, they are to be assigned 'page fragment numbers' 1, 2, 3, etc., in a sequence based on scanning the page strictly column by column, from top to bottom within each column and from left to right across the page. This 'page fragment number' and nothing else, should be entered in subfield 2.

3 *Additional information.* Subfield 3 is used to enter additional or alternative page numbers, or pagination which cannot be expressed in the manner defined for subfield 1. Examples are:

(a) Serials which carry page numbering both within issue and within volume. In such cases the page numbering within the *larger* unit (usually volume or year) is to be regarded as the preferred numbering, and will be entered in subfield 1. The issue page numbering may be entered in subfield 3, but is not regarded as an essential element.

(b) Items whose only page numbering is within the individual contribution. In such cases subfield 3 may be used in free form to describe the pagination.

3. *Examples*

(Example 1)

Paper occupies page 1234 only, and no other paper begins on that page.

Contents of field A20: ØØ●11234

(Example 2)

Paper occupies pages 1234 to 1246, and no other paper begins on page 1234.

Contents of field A20: ØØ●11234-1246

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(Example 3)

Paper occupies pages 33 to 37, 41 and 43, and no other paper begins on page 33.

Contents of field A20: ØØ●133-37,Ø41,Ø43

(Example 4)

Two papers contained wholly on page 1234, and a third paper begins on page 1234 and continues in sequence to page 1246.

Contents of field A20:

First paper: ØØ●11234●21

Second paper: ØØ●11234●22

Third paper: ØØ●11234-1246●23

A21: DATE OF ISSUE OR IMPRINT

1. *Field definition*

Tag: A21
Indicators: Not used: entered as zeros
Subfields: 1: 'Normalized date', entered in ISO Standard format: fixed length, eight-digit numeric
2: 'Date part'
3: Date in full/non-Gregorian date
N: Notes
Repeatable: No

Note that the definition of field A21 applies also to field A22 (DATE OF PUBLICATION) and field A32 (DATE OF MEETING), except where otherwise indicated.

2. *Use of field A21*

Field A21 is used to record:

(a) The nominal date of issue of a serial issue or part, as distinct from the actual date of publication which may sometimes be different.
(b) The imprint date(s) of a book or non-serial collection.
(c) The nominal date of a report.
(d) The date of submission of a thesis or dissertation.

Field A21 is *not* used to record:

(a) A date of publication of any of the above items which differs from the nominal date of issue or imprint (see field A22).
(b) The date of publication of a patent document (see field A22).

If there is doubt as to whether the date given on the piece is the nominal issue date or date of publication, it should be entered in field A21.

Field A21 may occur in records at any bibliographic level.

3. *Data description*

This section is applicable to fields A21, A22 and A32.

Subfields

1 *'Normalized date'.* This subfield is used in all cases to enter a single date (in accordance with ISO Recommendation R 2014 [10] as a fixed-length eight-digit numeric string of the form YYYYMMDD, where:
YYYY represents the year in full, or the year of the last* date cited if the original publication cites a period of more than a single year, or overlapping between two years.
MM represents the month as a two-digit number in the range ØØ to 12. MM = ØØ if no month is cited. If the original publication cites a period of more than a single month, or overlapping between two months, the month of the last* date cited is to be entered here
DD represents the day as a two-digit number in the range ØØ to 31. DD = ØØ if no day is cited. If the original publication cites a period of several days, the day of the last* date cited is to be entered here.

2 *'Date part'.* This subfield is used to record any part or subdivision of the date which cannot be expressed numerically in subfield 1. Examples are: seasons or quarters as subdivisions of a year; the identification of successive newspaper editions issued on the same day; the identification of a 'month part' as shown in the last Example 4 below. Any entry made in the subfield should be in the original language and precise wording of the piece, transliterated if necessary.

3 *Date in full/non-Gregorian date.* In certain circumstances, when the date given in subfield 1 is not the complete 'date of issue', it may be necessary to include also a complete record of a complex date given on the original publication, e.g. '1969-1970', '22-25 April 1971', etc.

Since the principal function of recording the date in this form is likely to be either as part of the printable data to be displayed in an abstract journal or search printout, it is not considered desirable to define a formalized representation for the subfield. This is left as an implementation feature which will probably be decided in relation to the language or languages used in the particular data base.

Subfield 3 may also be used to record a non-Gregorian date in free form, if the date given on the original is not according to the Gregorian calendar. In such cases the use of subfield 1 is optional, since it requires conversion to the corresponding Gregorian date.

4. *Examples*

(Example 1)

"29th May 1971"

Contents of date field: ØØ●11971Ø529

* Not applicable to field A32: see 'Data description' for field A32.

(Example 2)*

"July-Dec. 1969"

Contents of date field: ØØ●1196912ØØ●3July-␣Dec.␣1969

(Example 3)

"Printemps 1970"

Contents of date field: ØØ●1197ØØØØØ●2Printemps

(Example 4)

1969 Nr. 6 Marz (II)

Contents of date field: ØØ●1196ØØ3ØØ●2II

(Example 5)*

1969-70

Contents of date field: ØØ●1197ØØØØØ●31969-197Ø

(Example 6)*

27th June - 3rd July 1971

Contents of date field: ØØ●1197ØØ7Ø3●327␣June␣-␣03␣July␣1971

A22: DATE OF PUBLICATION

1. *Field definition*

Tag: A22
Indicators: Position 1 not used: entered as zero
Position 2 may take any of the values Ø, 1, 2, 3, 4, 5, 6 (for patent documents only: otherwise entered as zero)
Subfields: 1: 'Normalized date', entered in ISO Standard format: fixed length, eight-digit numeric
2: 'Date part'
3: Date in full/non-Gregorian date
N: Notes
Repeatable: No

2. *Use of field A22*

Field A22 is used to record:

(a) The actual date of publication of a serial issue, report, or other item, if this is different from the nominal date of issue, and the information is available on the piece.

(b) The date of publication of a patent document.

When used under (a) above, field A22 is in all respects identical to field A21.

Date of publication of a patent document

When field A22 refers to a patent document, indicator position 2 may optionally be used to distinguish between different circumstances and methods of publication, in accordance with the following table:

Ø Mode of publication not specified.
1 Date of making available to the public by viewing, or copying on request, an unexamined document, on which no grant has taken place on or before the said date.
2 Date of making available to the public by viewing or copying on request, an examined document on which no grant has taken place on or before the said date.
3 Date of publication by printing or similar process of an unexamined document, on which no grant has taken place on or before the said date.
4 Date of publication by printing or similar process of an examined document, on which no grant has taken place on or before the said date.
5 Date of publication by printing or similar process of a document, on which grant has taken place on or before the said date.
6 Date of making available to the public by viewing, or copying on request, a document on which grant has taken place on or before the said date.

The following table shows the relationship between these indicators and ICIREPAT INID Codes for publication dates.

Indicator	*INID Code*
Ø	any of 41-45, 47
1	41
2	42
3	43
4	44
5	45
6	47

For patent documents, only subfield 1 (date in ISO Standard format) will normally be used.

3. *Data description*

For all other aspects of field A22 format and contents, see field A21.

A23: LANGUAGE(S) OF TEXT

1. *Field definition*

Tag: A23
Indicators: Not used: entered as zeros
Subfields: Ø: Language code or codes
N: Notes
Repeatable: No

2. *Date description*

Field A23 is used to enter one or more fixed-length codes indicating the language or languages in which the text of the item appears. The codes used should be in accordance with the relevant ISO Standard (in preparation); see Appendix B.

Pending the availability of an ISO Standard, an interim coding scheme may be adopted as agreed by the parties to an exchange of bibliographic information.

If the original text appears in more than one language, all languages concerned should be cited in

* Not applicable to field A32: see examples under field A32.

field A23. Multiple language codes should either be packed together without separators, or separated by a space, as an implementation option. The former approach is preferred as more logical for machine-readable records. Field A23 is used in records at all bibliographic levels.

A24: LANGUAGE(S) OF SUMMARIES

1. *Field definition*

Tag: A24
Indicators: Not used: entered as zeros
Subfields: Ø: Language code or codes
N: Notes
Repeatable: No

2. *Data description*

Field A24 is used to enter one or more fixed-length codes indicating the language or languages of summaries given on the original piece. Field A24 is a supplementary element: in normal practice, it is likely to be used only where the original piece carries summaries in a language or languages different from the text.

The codes used should be in accordance with the relevant ISO Standard (in preparation); see Appendix B.

Pending the availability of an ISO Standard, an interim coding scheme may be adopted as agreed by the parties to an exchange of bibliographic information.

Multiple language codes should either be packed together without separators, or separated by a space, as an implementation option. The former approach is preferred as more logical for machine-readable records.

Field A24 is used in records at all bibliographic levels.

A25: PUBLISHER: NAME & LOCATION (MONOGRAPH OR COLLECTION)

1. *Field definition*

Tag: A25
Indicators: Position 1 may be used to link 'publisher' with 'ISBN' (field A26) where more than one publisher is cited, and the work carries a different ISBN for each country in which it is distributed (see field A26)
Position 2 not used: entered as zero
Subfields: 1: Publisher name
2: Location or address
3: Country code (optional element): fixed length, two or three characters, depending on the coding scheme adopted
N: Notes
Repeatable: Yes: where more than one publisher is cited, field A25 should be repeated as many times as required

2. *Data description*

Field A25 is used to enter the name and location of an organization cited as publisher of a monographic or collective work.

3. *Subfields*

1 *Publisher name*, entered as given on the piece, transliterated if necessary in accordance with UNISIST recommendations.

2 *Location*. The location of the publisher is entered in subfield 2. It is expected that normal practice will be to give the town or city, followed by county, province or state if required. A full address may, however, be entered if desired.

3 *Country code*. The country where the publisher is located may optionally be indicated by a code in subfield 3. The coding scheme used should be one of the codes defined by the relevant ISO Standard; see Appendix A.

3. *Example*

```
Publisher as given on the piece:

"Phaidon Press, 5 Cromwell Place,
LONDON SW7"

Contents of field A25:

   ØØ@1Phaidon␣Press@2London@3344

or ØØ@1Phaidon␣Press@2London@3GBR

or ØØ@1Phaidon␣Press@2London
```

A26: ISBN

1. *Field definition*

Tag: A26
Indicators: Position 1 may be used to link 'ISBN' with 'publisher' (field A25) where more than one publisher is cited, and the work carries a different ISBN for each country in which it is distributed
Position 2 not used: entered as zero
Subfields: Ø: ISBN (International Standard Book Number): fixed length, ten-characters. Character set restricted to numerals only, except for the last character, which may be letter X.
N: Notes
Repeatable: Yes: where the work carries more than one ISBN, field A26 may be repeated as many times as required.

2. *Data description*

Field A26 is used to enter an International Standard Book Number (ISBN), in accordance with the relevant ISO Standard [11]. Only the number itself should be entered in subfield 1 (*not* the letters 'ISBN' which may precede the number as printed on the piece).

Field A26 can apply only to a monographic or collective item; but it may appear in a record at the analytic level, for example if the record refers to a chapter in a work which carries an ISBN.

ISBN

An ISBN is a ten-character number made up of four components:
(a) Group identifier;
(b) Publisher identifier;

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(c) Title identifier
(d) Check character

Components (a), (b) and (c) are of variable length (within the overall fixed length of the number), and are made up of arabic digits Ø to 9. Component (d) is a single character, which may be the letter X or any of the digits Ø to 9.

In written or printed form, the four components are conventionally separated by spaces or hyphens. In the machine record, the number should be stored in packed form, without separators.

Calculation of check character

The check character is calculated on modulus 11, as described in the following example:

(a) Write the digits of the number without check character: Ø 5 7 1 Ø 8 9 8 9
(b) Write the constant weights associated with each position of the number: 1Ø 9 8 7 6 5 4 3 2
(c) Multiply each digit by its associated weight: Ø 45 56 7 Ø 4Ø 36 24 18
(d) Add the product of these multiplications: Ø+45+56+7+Ø+4Ø+36+24+18 = 226
(e) Divide the sum by modulus 11 to find the remainder: 226÷11 = 2Ø, plus a remainder of 6
(f) Subtract the remainder from modulus 11 to find the required check digit: 11-6 = 5
If the result of this subtraction is 10, use check character X. If there is no remainder, the check digit is Ø.
(g) Append the check digit to make the full ten-digit ISBN: Ø 571 Ø8989 5.

3. *Example*

```
ISBN as shown on the piece:

"ISBN Ø 571 Ø8989 5"

Contents of field A26:  ØØ@ØØ571Ø89895
```

A27: EDITION

1. *Field definition*

Tag: A27
Indicators: Not used: entered as zeros
Ø: Edition number: variable-length numeric only
N: Notes
Repeatable: No

2. *Data description*

Field A27 is used to enter the edition number of a monograph or collection. Subfield Ø should contain one or more numeric digits, and nothing else. Roman numerals should be converted to arabic, and ordinals should be entered as pure numbers, without suffixes such as "th". Any other information concerning the edition or editions should be entered in free form in subfield N.

Field A27 is applicable only to an item at either the monographic or collective level, but it may also appear in a record at the analytic level, for example when the record describes a chapter in a book.

3. *Example*

```
Edition as indicated on the piece:

"XIIth edn."

Contents of field A27:  ØØ@Ø12
```


A28: COLLATION: DESCRIPTION OF NON-SERIAL COLLECTION

1. *Field definition*

Tag: A28
Indicators: Not used: entered as zeros
1: Number of pieces: variable-length, numeric only
2: Other descriptive information (optional element)
N: Notes
Repeatable: No

2. *Data description*

Field A28 is used to describe the physical pieces which together constitute a non-serial collection to which the bibliographic record refers.

Although field A28 always refers to a collective item, it may be included in a record at the monographic or analytic levels, for example when the record describes a single volume belonging to a collection, or a chapter in a book which is itself part of a collection.

Subfields

1 *Number of pieces:* in the simplest case, the only description required may be the number of pieces or volumes which together constitute the collection. This number, and nothing else, is entered in subfield 1, as one or more numeric digits.
2 *Other descriptive information:* any other descriptive information regarding the physical composition of the collection (e.g. format, collation of individual volumes, plates, maps, inserts) may optionally be entered in subfield 2, in free form.

3. *Example*

```
"Twenty-four vols."

Contents of field A28:  ØØ@124
```

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A29: COLLATION: DESCRIPTION OF MONOGRAPH

1. *Field definition*

Tag: A29
Indicators: Not used: entered as zeros
1: Number of pages
2: Other descriptive information (optional element)
N: Notes
Repeatable: No

2. *Data description*

Field A29 is used to describe the collation details of a monograph, including:
(a) Book published as a single piece;
(b) Volume forming part of a series or collection of books;
(c) Patent document;
(d) Report;
(e) Thesis or dissertation.

Although field A29 always refers to a monographic item, it may be included in a record at the analytic level, for example when the record describes a chapter in a book or report.

Subfields

1 *Number of pages:* in the simplest case, the only required information is the total number of pages, which may be entered in free form in subfield 1, using both arabic and roman numerals if both are used on the piece. A single overall total may be given, if desired, or separate totals may be entered for separate sections which are numbered independently.
2 *Other descriptive information:* any other descriptive information regarding the physical composition of the monograph (e.g. format, inserts, separately numbered plates) may optionally be entered as subfield 2, in free form.

When field A29 is used for patent documents, the total number of pages, including drawings, should be entered as a single number in subfield 1.

3. *Example*

```
Preface 22 pages, numbered i to xxii

Text 226 pages, numbered 1 to 226

Contents of field A29:

   ØØ●1xxii␣+␣226

or ØØ●1248
```

A3Ø: NAME OF MEETING

1. *Field definition*

Tag: A3Ø
Indicators: Position 1 not used: entered as zero
Position 2 may take any of the values Ø, 1, 2, 3, 4
Subfields: 1: Name of meeting
2: Language code (optional)
N: Notes
Repeatable: No

2. *Data description*

Field A3Ø is used to enter the name of a meeting (conference, symposium etc.), if the piece or collection to which the record refers constitutes the proceedings of a meeting. If the meeting is one of a series ('Third International Conference on ...'), and the titles of successive meetings in the series are differentiated by a 'meeting number', this number should be included as part of the name entered in field A3Ø.

The use of field A3Ø is optional if the name of the meeting occurs as part of the title of the piece or collection; in this event, however, it may still be found desirable to enter the name of the meeting separately in field A3Ø, e.g. in order to compile a 'conference index'.

It should be noted that the recommendations of the *Reference Manual* in respect of meetings and conferences do *not* imply that the bibliographic record must always include a reference to the fact that an individual paper was originally presented at a meeting. For example, this information is often included as a footnote to a serial contribution; but its inclusion in the bibliographic record is optional *unless the serial issue, or a part of the issue, constitutes the formal proceedings of the meeting.*

Field A3Ø may be used in records at all bibliographic levels. The format of field A3Ø is identical to that of field AØ8 (since the name of a meeting is regarded as a form of title).

Indicator position 2 may be used in accordance with the table below:
Ø Unspecified: i.e. indicator not used
1 Name of meeting given in original language and alphabet
2 Name of meeting in original language and alphabet, but modified in content as part of the cataloguing process
3 Name transliterated or transcribed as part of the cataloguing process
4 Name translated (with or without other modification) as part of the cataloguing process.

3. *Examples*

```
"PHYSICS OF SEMICONDUCTORS.  Proceedings
of the 7th International Conference.
Paris 1964"

Contents of field A3Ø:

   Ø1●1Physics␣of␣Semiconductors.␣7th␣
   International␣Conference

or Ø1●17th␣International␣Conference␣on␣
   the␣Physics␣of␣Semiconductors
```

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A31: LOCATION OF MEETING

1. *Field definition*

Tag: A31
Indicators: Not used: entered as zeros
1: Location of meeting
2: Country code (optional element): fixed length, two or three characters depending on the code adopted
N: Notes
Repeatable: No

2. *Data description*

Field A31 is used to enter the location of a meeting, the name of which has been entered in field A3Ø.

Subfields

1 *Location of meeting*, entered in free form. The amount of detail required will be dictated partly by the nature of the location, and partly by the information available on the piece. If the country is given in the form of a code in subfield 2, it should *not* be included in subfield 1.

2 *Country code*. The country in which the meeting was held may optionally be entered in subfield 2, using an ISO Standard country code (see Appendix A).

Field A31 may be used in records at all bibliographic levels.

3. *Example*

```
Location of meeting as given on the piece:

"Reading, Berks., England"

Contents of field A31:

   ØØ●1Reading,␣Berks.●2344

or ØØ●1Reading,␣Berks.●2GBR

or ØØ●1Reading,␣Berks.,␣England
```

A32: DATE OF MEETING

1. *Field definition*

Tag: A32
Indicators: Not used: entered as zeros
Subfields: 1: 'Normalized date': fixed length, eight-digit numeric
2: 'Date part'
3: 'Date in full'
N: Notes
Repeatable: No

2. *Data description*

Field A32 is used to enter the date (or inclusive dates) of a meeting, the name of which has been entered in field A3Ø.

The format and method of use for field A32 is as described for field A21 (DATE OF ISSUE OR IMPRINT), except that where inclusive dates are cited for a meeting, the 'normalized date' in subfield 1 should be derived from the *starting date* of the meeting, not the end date (see Examples).

Field A32 may be used in records at all bibliographic levels.

3. *Examples*

```
(Example 1)

Dates of meeting:

"June - July 1969"

Contents of field A32:

ØØ●11969Ø6ØØ●3June␣-␣July␣1969
```

```
(Example 2)

Date of meeting:

"27th June - 3rd July 1971"

Contents of field A32:

ØØ●11971Ø627●327␣June␣-␣3␣July␣1971
```

A33: IDENTIFICATION OF PATENT DOCUMENT

1. *Field definition*

Tag: A33
Indicators: Not used: entered as zeros
1: Country code: fixed length, two or three characters depending on the code adopted
2: Type of patent document (ICIREPAT code): fixed length, two characters
3: Type of patent document (CODEN): fixed length, six characters (this subfield is an *alternative* to subfield 2)
4: Type of patent document, as a free text description (optional element)
5: Document number
N: Notes
Repeatable: No

2. *Data description*

Field A33 is used to enter the full identification of a patent document.

The *preferred* form of identification consists of the following subfields:

1 Country code
2 ICIREPAT code (see Appendix D)
5 Document number

Alternative forms of identification may consist of

either		*or*	
1	Country code	1	Country code
3	CODEN	4	Type of document, as a free text description
5	Document number	5	Document number

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Subfields are defined in more detail below:

1 *Country code*, based on ISO Standards (see Appendix A). This subfield is compulsory.

2 *ICIREPAT code.* The ICIREPAT code is the preferred means of identifying 'document type'. It is a fixed-length two-character code. A complete list of these codes is given in Appendix D.

3 *CODEN.* CODEN may be used instead of the ICIREPAT code to identify 'document type'. It will be noted that there is redundancy between this subfield and subfield 1, since CODEN for patent documents identify not only the document type but also the country of origin. However, it is considered desirable that the ISO country code should always be included in the record.

4 *Type of patent document*, entered as a free text description (e.g. 'Offenlegungsschrift', 'Certificat d'Utilité'). This subfield may be used in place of, or as well as, either of subfields 2 and 3.

5 *Document number.* Subfield 5 is used to record the complete number assigned to the document, including any prefixes and/or suffixes. Some countries use an annual numbering system; where this is the case, exact identification of the number must include, as a prefix or suffix, the year of filing or granting, respectively.

Do not record the number separately assigned to an *application* in this subfield, but in field A36. Do not record the serial or filing number assigned to a *priority application* in this subfield, but in field A37.

The document number should be entered without punctuation or spaces within the number. Subfield 5 is equivalent to ICIREPAT INID 11.

Field A33 may be used at the monographic level; or at the analytic level if a patent document is abstracted from an official gazette which is handled as a serial.

3. *Example*

```
"United States Patent   [11] 3,607,127"

Contents of field A33:

   ØØ●11Ø1●3USXXAM●536Ø7127

or ØØ●1USA●3USXXAM●536Ø7127

or ØØ●11Ø1●4Patent●536Ø7127

or ØØ●1USA●4Patent●536Ø7127
```

A34: PERSON ASSOCIATED WITH A PATENT DOCUMENT

1. *Field definition*

Tag: A34

Indicators: Position 1 not used: entered as zeros
Position 2 may take any of the values Ø, 1, 2, 3, 4, 5, 6, 7

Subfields: 1, 2, 3, 4, 5, 6, 9, N (see field A11 for definition of subfields)

Repeatable: Yes: if more than one person is cited on a patent document, field A34 may be repeated as many times as required.

2. *Data description*

Field A34 is used to enter the names of persons cited on a patent document as inventors, applicants, grantees or assignees.

Field A34 may be repeated as many times as are necessary in a single record to enter the names of all individuals cited in the above-mentioned capacities.

Fields A34 may be used in records at the monographic or analytic levels depending on whether the record is derived from the patent document itself or from an entry in an official gazette.

Personal names are to be recorded in field A34 according to the conventions specified for field A11, using the same set of subfield codes.

Subfield 1 (name as derived from the piece) is the only essential element: all others are optional.

Indicators

The indicators for field A34 differ from those defined for field A11 and other personal name fields. Indicator position 1 is not used. Indicator position 2 may be used, optionally, as with other personal name fields, to define the relationship between the person and the work cited, but a separate table of values is defined below to cover the special requirements of patent documents. Indicator position 2 may therefore take any of the following values:

Ø Relationship not specified (may be any of those listed below)
1 Inventor who is neither an applicant nor a grantee
2 Inventor who is also an applicant but not a grantee
3 Inventor who is also a grantee but not an applicant
4 Inventor who is also a grantee and an applicant
5 Applicant who is neither a grantee nor an inventor
6 Grantee who is neither an applicant nor an inventor
7 Grantee who is also an applicant but not an inventor.

It should be noted that for United States Patents the following conventions apply:

(a) The applicants must, except under very exceptional circumstances, be the inventors.
(b) Unless the rights attached to the application have been assigned the inventors are also the grantees.
(c) If the rights attached to the application have been assigned the assignees are to be regarded as the grantees.

Thus, the names of the parties concerned with a United States Patent will almost invariably be recorded using indicators Ø2 and Ø6 or using indicator Ø4. The same conventions apply for patents from Canada and the Philippines, which have patent laws similar to those of the United States in this respect.

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The relationship between the above-mentioned indicators and the ICIREPAT INID Codes is as shown in the table below; but note that the ICIREPAT scheme does not differentiate between individuals and corporate bodies – field A35 must be used for inventors, applicants, grantees and assignees which are corporate bodies.

Indicator position 2	*INID Code*
Ø	any of 71-73, 75, 76
1	72
2	71+72; or 75
3	72+73
4	71+72+73; or 76
5	71
6	73
7	71+73

If an inventor is also an applicant, or is also an applicant and a grantee, he may be identified on a patent document (a) by INID 75 or 76, or (b) by INID 71 used together with 72, or with 72 and 73, or (c) by repeating the name and using a different INID Code for each mention of the name. In situation (c) *all* the INID Codes associated with each name must be considered in order to determine the correct indicator to be used. A similar situation arises in the case of an applicant, who may be an inventor and a grantee, and in the case of a grantee, who may be an inventor, or an inventor and an applicant.

3. *Examples*

```
(Example 1)

Individual named on the piece (United States
Patent - no mention of assignee):

Inventor:  Joseph P. Segre, 45 Wuabond Road,
Acton, Mass. 01720

Contents of field A34:

   Ø4●1Segre,ÞJosephÞP.

or Ø4●1Segre,ÞJ.P.
```

```
(Example 2)

Individuals named on the piece (United States
Patent - assignee named):

Inventors:  Herbert S. Polin and Gustavo
Kuhn, both of Veyrier, Switzerland

Contents of field A34 (repeated three times):

First individual:  Ø2●1Polin,ÞHerbertÞS.
                or Ø2●1Polin,ÞH.S.
Second individual: Ø2●1Kuhn,ÞGustavo
                or Ø2●1Kuhn,ÞG.
Third individual:  Ø6●1Vogel,ÞPaul
                or Ø6●1Vogel,ÞP.
```

```
(Example 3)

Individual named on the piece (French Patent):

Applicant:  Cinqualbre, Paul

Grantee:    Idem

Inventor:   Not named

Contents of field A34:

   Ø7●1Cinqualbre,ÞPaul

or Ø7●1Cinqualbre,ÞP.
```

A35: CORPORATE BODY ASSOCIATED WITH A PATENT DOCUMENT

1. *Field definition*

Tag: A35

Indicators: Position 1 not used: entered as zeros
Position 2 may take any of the values Ø, 1, 2, 3, 4, 5, 6, 7

Subfields: 1: Name of corporate body
2: Address of corporate body (optional element)
3: Country code (optional element): fixed length, two or three characters depending on the code adopted
N: Notes

Repeatable: Yes: if more than one corporate body is cited on a patent document, field A35 may be repeated as many times as required

(Note that in general, field A35 follows the same format and conventions as are defined for field A17).

2. *Data description*

Field A35 is used to record the names of corporate bodies cited on a patent document as inventors, applicants, grantees or assignees. While corporate inventorship is rare, it is nevertheless provided for in the laws of some countries.

Field A35 may be repeated as many times as are necessary in a single record to enter the names of all corporate bodies cited in the above-mentioned capacities.

Field A35 may be used in records at the monographic or analytic levels, depending on whether the record is derived from the patent document itself or from an entry in an official gazette.

Corporate names are to be recorded generally according to the conventions specified for field A17, using the same set of subfield codes.

Subfield 1 (name of corporate body) is the only essential element: all others are optional.

Indicators

In field A17 and other 'corporate author' fields the indicator positions are not used. In field A35, however, it may be necessary to define the relationship between the corporate body and the patent document cited, and for this purpose indicator position 2 is used exactly as described under field A34. The

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relationship between the indicators and ICIREPAT INID codes is also as described under field A34.

Field A35 corresponds to INID codes 71-73, 75 or 76, wherever these are associated with the name of a corporate body, and not a person.

A36: DOMESTIC FILING DATA

1. *Field definition*

Tag: A36
Indicators: Not used: entered as zeros
Subfields: 1: Number assigned to a patent application
2: Date of filing the patent application referred to in subfield 1: fixed-length eight-digit numeric
3: Other filing date(s) associated with the application: variable-length, numeric
N: Notes
Repeatable: Yes: if a patent document is based on more than one original application field A36 may be repeated as many times as required

2. *Data description*

Field A36 is used to record the domestic filing data associated with a patent document.

Essentially this data consists of:
(a) an application number;
(b) the date on which the application was filed;
(c) under certain circumstances, another date or dates associated with the application ('exhibition' filing date, date of filing complete specification, etc.).

Sometimes a patent document is the result of more than one original application. In this event, field A36 may be repeated as many times as required.

Field A36 is regarded as an optional element in the bibliographic description of a patent document. It may occur in records at the monographic or analytic levels, depending on whether the record is derived from the patent document itself or from an entry in an official gazette.

Subfields

1 *Number assigned to a patent application.* Subfield 1 is used to record the complete number, including any prefixes and/or suffixes, assigned to an application by the Patent Office which eventually publishes the resulting document, or otherwise makes it available to the public. Some countries use an annual numbering system; where this is the case, exact identification of the number must include, as a prefix or suffix, the year of filing or granting, respectively. The number assigned to the application should be entered here without punctuation or spaces within the number (but retaining any punctuation which separates the number from a prefix or suffix).

Subfield 1 is equivalent to ICIREPAT INID 21 (Number assigned to the application: e.g. 'Numero d'enregistrement national', 'Aktenzeichen').

2 *Date of filing the patent application*. Subfield 2 is used to record the *application date*, on which the application referred to in subfield 1 was filed in the Patent Office which eventually publishes the resulting document, or otherwise makes it available to the public.

Subfield 2 corresponds to ICIREPAT INID 22. The date is entered in ISO Standard format, as an eight-digit number of the form YYYYMMDD (as in field A21, subfield 1).

3 *Other filing date(s).* Subfield 3 may be used to enter one or more other dates associated with the filing of a patent application, such as an 'exhibition' filing date or the date of filing a complete specification following a provisional specification.

Subfield 2 always carries the original (i.e. the earliest) date of filing.

Subfield 3 corresponds to ICIREPAT INID 23.

Each date in subfield 3 is entered in ISO Standard format, as an eight-digit number of the form YYYYMMDD.

3. *Examples*

```
(Example 1)

"Application no:  084,080

Filing date:  September 25, 1970"

Contents of field A36:

ØØ●1Ø84Ø8Ø●2197ØØ925
```

```
(Example 2)

"Application no:  123,456, filed April 14, 1970
 Application no:  131,204, filed August 22, 1970
 Date of filing (single) complete specification:
 April 19, 1971"

Field A36 is repeated as below:

First application:  ØØ●1123456●2197ØØ414●31971Ø419

Second application: ØØ●1131204●2197ØØ822●31971Ø419

(In this example, the 'notes' subfield might
also be used to indicate that the two applications
were combined into a single complete specification).
```

A37: CONVENTION PRIORITY DATA

1. *Field definition*

Tag: A37
Indicators: Not used: entered as zeros
1: Country code: fixed length, two or three characters depending on the code adopted
2: Number assigned to the priority application
3: Date of filing of priority application: fixed length, eight-digit numeric
N: Notes
Repeatable: Yes: if more than one priority application is cited, field A37 may be repeated as many times as required.

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2. *Date description*

Field A37 is used to enter details of a priority application which is cited on the patent document to which the bibliographic record refers. It is regarded as an optional element in the bibliographic description of a patent document.

The field is divided into three subfields, to record respectively the country of the priority application, the application number, and the date, all of which must be entered.

A patent document may cite more than one priority application, in which case field A37 may be repeated as many times as required.

Field A37 may appear in a record at either the monographic or analytic level, depending on whether the bibliographic record is derived from the patent document itself or from an entry in an official gazette, treated as a serial 'contribution'.

Subfields

1 *Country* where the priority application was made. The country should be entered using one of the ISO Standard country codes (see Appendix A).
Subfield 1 corresponds to ICIREPAT INID 33.

2 *Number assigned to the priority application.* The number must be recorded in full, including any prefixes or suffixes. It should be entered without commas or spaces, but punctuation marks which link a prefix or suffix to the number should be retained. Note that the application number to be entered in this subfield should not be confused with:
(a) the application number associated with the patent document to which the record refers: this number is entered in field A36.
(b) the document number (if known) assigned to a patent document arising from the priority application: this number is not a required data element in the bibliographic description.
Subfield 2 corresponds to INID 31.

3 *Date of filing* of priority application: to be entered in ISO Standard format, as an eight-digit number of the form YYYYMMDD, where
YYYY represents the year in full
MM " the month expressed as a two-digit number with leading zero where required
DD " the day of the month expressed as a two-digit number with leading zero where required.
Subfield 3 corresponds to INID 32.

3. *Example*

```
"Application made in France (No.29624) on
27 Aug. 1965"

Contents of field A37:

   ØØ●133Ø●229624●31965Ø827

or ØØ●1FRA●229624●31965Ø827
```

A38: REFERENCE TO A LEGALLY RELATED DOMESTIC DOCUMENT

1. *Field definition*

Tag: A38
Indicators: Position 1 not used: entered as zero
Position 2 may take any of the values Ø, 1, 2, 3, 4
Subfields: 1: Country code: fixed length, two or three characters depending on the code adopted (optional element)
2: Type of patent document (ICIREPAT code: fixed length, two characters
3: Type of patent document (CODEN): fixed length, six characters (this subfield is an *alternative* to subfield 2)
4: Type of patent document, as a free text description (optional element)
5: Document number
6: Application number (this subfield is an *alternative* to subfield 5, when the document number is not known)
N: Notes
Repeatable: Yes: if more than one legally-related domestic document is cited. Field A38 may be repated as many times as required

2. *Data description*

Field A38 may be used to record details of a patent document (a) legally related to the document to which the bibliographic record refers, and (b) published in the same country.

Field A38 is regarded as an optional element in the bibliographic description of a patent document.

The preferred form of reference to a legally related domestic document consists of the following subfields:
1 Country code (optional, since by definition it must be the same as the country code in field A33)
2 ICIREPAT code (see Appendix D)
5 Document number (or subfield 6: application number may be used when the document number is not known).

The definitions and form of entry for subfields 1 to 5 are identical to those given under field A33: other forms of reference than the 'preferred' form may be used as in field A33. Conventions for recording an application number in subfield 6 are as described under field A36, subfield 1.

Field A38 may be repeated if more than one legally-related domestic document is cited.

Indicators

Indicator position 2 may be used to distinguish between different types of legal relationship between the document cited and the document to which the bibliographic record refers, in accordance with the following table of values:
Ø Relationship not specified: may be any of those given below
1 Relation due to addition(s)
2 " " " division(s)
3 " " " continuation(s) – including continuation(s)-in-part
4 " " " reissue(s)

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These indicator values correspond to the ICIREPAT INID codes shown in the following table:

Indicator	*INID Code*
Ø	any of 61-64
1	61
2	62
3	63
4	64

3. *Examples*

In these examples, the following conventions have been adopted, in view of the considerable range of variation which is possible:

(a) Indicator position 2 is used to show the nature of the legal relationship: alternatively, this could have been left unspecified.

(b) Country codes are included in all cases, and the numeric form of the ISO draft code is used.

(c) CODEN are used to show the type of patent document.

(Example 1)

Relation due to addition

Addition data as given on French patent specification: "Nature du titre principal: Brevet d'invention n° 1.548.709"

Contents of field A38:

Ø1●133Ø●3FAXXA3●51548709

(Example 2)

Relation due to division(s)

Division data as given on British patent specification: "Divided out of number 1242211"

Contents of field A38:

Ø2●1344●3BRXXAA●51242211

(Example 3)

Relation due to continuation(s)-in-part

Continuation data as given on US patent specification: "Continuation-in-part of application Ser. No. 719,052, Apr. 5, 1968, now Patent No. 3,492,221, dated Jan. 27, 1970".

Contents of field A38:

Ø3●11Ø1●3USXXAM●53492221

(Example 4)

Relation due to reissue

Reissue data as given on US patent specification: "Original No. 3,303,026, dated Feb. 7, 1967, Ser. No. 533,579, Mar. 11. 1966. Application for reissue Feb. 7. 1969, Ser. No. 802,291"

Contents of field A38:

Ø4●11Ø1●3USXXAM●533Ø3Ø26

A39: REPORT NUMBER

1. *Field definition*

Tag: A39
Indicators: Not used: entered as zeros
Subfields: Ø: Report number
N: Notes
Repeatable: Yes: if a report carries more than one number, field A39 may be repeated as many times as are required

2. *Data description*

Field A39 is used to enter a number which identifies a report (but *not* a contract or grant number, which is not regarded as an essential element for bibliographic description).

The number should be entered exactly as shown on the document, including punctuation and spaces. Frequently the report number may include a component which identifies a report series: the number entered in field A39 should include this component, even if the report series is separately identified elsewhere in the record (e.g. by ISSN).

If the report carries more than one identification number, field A39 may be repeated as required.

Field A39 may be used in records at the monographic or analytic levels.

3. *Example*

"Report No. AIP ID 70-P"

Contents of field A39:

ØØ●ØAIPbIDb7Ø-P

A4Ø: NAME OF PERFORMING ORGANIZATION

1. *Field definition*

Tag: A4Ø
Indicators: Not used: entered as zeros

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1: Name of organization
2: Address or location (optional element)
3: Country code: fixed length, two or three characters, depending on the code adopted (optional element)
N: Notes

Repeatable: Yes: if more than one organization is cited, field A4Ø may be repeated as many times as required

2. *Data description*

Field A4Ø is used to enter the name of an organization responsible for performing the whole or part of the work which is the subject of a report, if and only if this organization is different from the corporate author or author affiliation.

The format of field A4Ø is identical to that defined for field A17 (CORPORATE AUTHOR). Only subfield 1 (name of organization) is an essential element: others are optional.

Field A4Ø may be repeated as required, if more than one organization is cited as responsible for the work.

Field A4Ø occurs only in records describing report literature, and may be used at either the monographic or analytic level.

A41: UNIVERSITY (OR OTHER EDUCATIONAL INSTITUTION)

1. *Field definition*

Tag: A41
Indicators: Not used: entered as zeros
1: Name of university, or other institution
2: Address or location (optional element)
3: Country code: fixed length, two or three characters, depending on the code adopted (optional element)
N: Notes
Repeatable: No

2. *Data description*

Field A41 is used to enter the name of the university, university department, or other degree-granting institution, to which a thesis or dissertation was submitted.

The format of field A41 is identical to that defined for field A17 (CORPORATE AUTHOR). Only subfield 1 (name of university, or other institution) is an essential element: others are optional.

Field A41 occurs only in records describing a thesis or dissertation, and therefore can be used only at the monographic level.

3. *Example*

```
"Queen Mary College, University of London"

Contents of field A41:

   ØØ●1University␣of␣London,␣Queen␣Mary␣College

or ØØ●1Univ.␣London,␣Queen␣Mary␣Coll.

or ØØ●1Univ.␣London,␣Queen␣Mary␣Coll.●3GBR

      (and other permitted variations)
```

A42: DEGREE LEVEL

1. *Field definition*

Tag: A42
Indicators: Not used: entered as zeros
Subfields: Ø: Degree level
N: Notes
Repeatable: No

2. *Data description*

Field A42 is used, in a record which refers to a thesis or dissertation, to enter a note of the level of the degree for which the thesis or dissertation was presented. This information may be entered in free form.

Field A42 is an optional data element. It is used only at the monographic level.

3. *Example*

```
"Ph.D."

Contents of field A42:

ØØ●ØPh.D.
```

A43: AVAILABILITY OF DOCUMENT

1. *Field definition*

Tag: A43
Indicators: Not used: entered as zeros
Subfields: Ø: Availability note
N: Notes
Repeatable: No

2. *Data description*

Field A43 is used to enter the source of availability of the document to which the bibliographic record refers, together with any other notes relevant to the process of obtaining the original document (e.g. restrictions on availability, price, order number).

An entry in field A43 may be made in free form, but should include the name (and, optionally, the address) of the organization from which the document is available. Abbreviations, if used, should be in accordance with UNISIST recommendations.

Field A43 may be used in records at all bibliographic levels. It is particularly relevant for reports and any other items which are not available through normal commercial channels.

3. *Example*

```
"Available from US Patent Office: ␣$0.50"

Contents of field A43:

ØØ●ØUS␣Pat.␣Off.,␣ØØ.5Ø
```

A44: SOURCE OF ABSTRACT

1. *Field definition*

Tag: A44
Indicators: Not used: entered as zeros
Subfields: Ø: Source of abstract
N: Notes
Repeatable: No

2. *Data description*

Field A44 may be used to enter a reference to the source of an abstract, other than an abstract which appears in the document to which the bibliographic record refers.

The entry is made in free form, but in so far as it consists of data elements (e.g. ISSN, volume and issue numbers) which are defined elsewhere in the *Reference Manual*, the same conventions for selection, transliteration, abbreviation etc., should be applied.

Field A44 is an optional data element. It may be used in records at all bibliographic levels.

A45: NUMBER OF REFERENCES

1. *Field definition*

Tag: A45
Indicators: Not used: entered as zeros
Subfields: Ø: number of references: variable length, numeric only
N: Notes
Repeatable: No

2. *Data description*

Field A45 is used to enter the number of reference cited in the document to which the bibliographic record refers.

Subfield Ø should contain an arabic number, and nothing else. Any additional details may be entered in the 'notes' subfield.

Field A45 is an optional data element. It may be used in records at all bibliographic levels.

3. *Example*

```
"27 references"
Contents of field A45:
ØØØ27
```

A46: 'SUMMARY ONLY' NOTE

1. *Field definition*

Tag: A46
Indicators: Not used: entered as zeros
Subfields: Ø: 'Summary only' note
N: Notes
Repeatable: No

2. *Data description*

Field A46 is provided in order to enter the information that the original document referred to in the bibliographic record is itself only a summary, and not the full text (as is often the case, for example, with conference proceedings).

The *presence* of field 46 provides an indication to the computer system that the original document falls into this category.

This *content* of field 46 may be defined by the user system, either as a code or as a free-form note in a language appropriate to the data base.

This field is optional, and may be used at any bibliographic level.

A47: ABSTRACT NUMBER(S)

1. *Field definition*

Tag: A47
Indicators: Not used: entered as zeros
Subfields: Ø: Abstract number(s)
N: Notes
Repeatable: Yes: if it is desired to include details of the appearance of the item in more than one abstracting service, field A47 may be repeated as many times as required.

2. *Data description*

Field A47 is provided in order to enter one or more 'abstract numbers' relating to coverage of the document in the printed publications of an abstracting service or services.

The format of field A47 is dependent on the practice of the service(s) concerned, and is therefore undefined.

This field is optional, and may be used at any bibliographic level.

A99: ANCILLARY DATA

1. *Field definition*

Tag: A99
Indicators: Not used: entered as zeros
Subfields: Ø: Ancillary data
N: Notes
Repeatable: Yes

2. *Data description*

Field A99 is provided as a special 'notes' field to make it possible to enter any ancillary data required in the bibliographic record which meets *both* the following criteria:

(a) The data cannot appropriately be entered in any of the fields defined in the *Reference Manual*, or in a 'notes' subfield associated with a particular field.

(b) The data is not such as to justify the definition of additional specific fields as part of a local implementation format: i.e. it is relatively informal in nature, or of highly infrequent occurrence.

It must be stressed that, although field A99 has been provided to meet the possibility of an occasional need for the inclusion of ancillary data in free form, its use is recommended only as a last resort. Where an individual service regularly needs to include data elements which are outside the scope of the *Reference Manual*, it is recommended that separately tagged 'local' fields should be defined for this purpose.

Field A99 may be entered in completely free form, and may be repeated if required. It may be used in records at all bibliographic levels.

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Chapter 3.1

RECORD FORMAT

ISO Standard

UNISIST proposals for a standardized bibliographic description in machine-readable form are to be regarded as a specific implementation of the International Standard ISO 2709 [1] for a communication format for bibliographic records. This Standard is a generalized derivative of the MARC II record structure, but independent of the data element definitions and tagging scheme used for Library of Congress MARC data bases.

Record format: general

The UNISIST/ICSU-AB Working Group on Bibliographic Descriptions has recommended the adoption of the record format defined by ISO 2709. The WGBD's objective has been to define an implementation of this standard which would be suited to the needs of abstracting and indexing services, information centres and others.

The record structure defined by ISO 2709 will be referred to hereafter as the 'ISO bibliographic record'.

The ISO bibliographic record is divided into three sections: a fixed length leader occupying this first 24 characters or bytes; a variable length directory; and data fields of fixed or variable length. Some aspects of the record structure are described below, but for full details the reader should consult ISO 2709. A diagrammatic representation of the record format is attached at the end of Part 3.

Record format: leader

The table below shows the contents of the fixed leader at the beginning of each record, as specified by ISO and as applied in the proposed UNISIST implementation (an asterisk in the right-hand column indicates exact correspondence with the ISO Standard):

Characters (or bytes)	ISO Standard	UNISIST implementation
0 to 4	Record length	*
5	Record status character (e.g. new, amended)	Record status character (to be defined by agreement between parties to an exchange: if not used, enter as zero)
6 to 9	Implementation codes	Character positions 6-8: literature type codes (see notes below) Character position 9: bibliographic level code (see notes below)
10	Indicator length	Indicator length: *minimum* 2 for UNISIST exchange records; but additional indicator positions may be defined by agreement between parties to an exchange; see below.
11	Identifier length	"2": see below
12 to 16	Base address of data	*
17 to 19	For user systems	*
20, 21	Directory map	*
22, 23	For future use	*

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Positions 6 to 8 are reserved for 'literature type' codes as follows:

Character position 6

Bit position	7 = '1'	Serial
"	" 6 = '1'	Book
"	" 5 = '1'	Report
"	" 4 = '1'	Thesis or dissertation
"	" 3 = '1'	Patent document
"	" 2 = '1'	Conference publication
"	" 1	Reserved for future use
"	" 0	Reserved for future use

Character positions 7 and 8 are also reserved for future use, and should be entered as zero, as should all unused bit positions in character position 6.

The bit codes defined above may be treated as additive if it is desired to categorize a document as belonging to more than one literature type. Bit position 1 (conference publication) can *only* be used in association with another code identifying the main literature type.

The bibliographic level code in character position 9 shall be derived from the following set:

Bit position	7 = '1'	Analytic
"	" 6 = '1'	Monographic
"	" 5 = '1'	Collective
"	" 0-4	Reserved for future use

(See Part 1 of the *Reference Manual* for discussion of 'literature type' and 'bibliographic level').

Record format: directory

The directory is a table containing a variable number of twelve-character entries, terminated by a field separator code (see below).

Each entry is divided into three parts:

(a) *Tag:* a three-character code identifying the content of the data field which corresponds to the directory entry.

(b) *Length:* the number of characters or bytes occupied by the data field which corresponds to the directory entry, including indicators and field separator (but *excluding* the record separator code if the data field is the last field in the record).

(c) *Starting character position:* a decimal number giving the position of the first character of the data field which corresponds to the directory entry. The position is computed relative to the base address of the data part of the record (i.e. the starting character position of the first data field following the directory is zero).

The number (n_l) of character positions allocated to hold the 'length' part of the directory entry is defined in character position 20 of the record leader. The number (n_s) of character positions allocated to hold the "starting character position" part of the directory entry is defined in character position 21 of the record leader. The arithmetic sum ($n_l + n_s$) must be equal to 9.

Where the length of a data field exceeds the largest number (N) which can be stored in the "length" part of the directory entry, two or more successive directory entries are assigned, and the field is treated as if it were divided into a series of arbitrary blocks of length N and a remainder block. Each directory entry referring to a field of this type contains the following items:

(a) The tag which identifies the field, repeated in all entries.

(b) Length = zero, except in the final directory entry, which contains the length of the remainder block.

(c) Starting character position of the block to which the directory entry refers.

Record format: data fields

In the proposed UNISIST implementation of the ISO bibliographic record format, a data field is defined as consisting of:

(a) An indicator;

(b) One or more subfields;

(c) A field separator (see below).

The indicator length may be varied by individual users to meet their own system requirements. However, the first two indicator positions are reserved for use as defined for each data field in Part 2 of the *Reference Manual.* Consequently, the minimum length of the indicator in a UNISIST exchange record is "2"; and the reserved indicator positions should not be used for any other purposes. The indicator length is shown in character position 10 of the record leader.

A subfield consists of a subfield identifier followed by a data string, which is delimited by either another subfield identifier or a field separator. A subfield identifier, in UNISIST exchange records, consists of a subfield identifier flag (see below) and one other character, normally a decimal digit or a letter. In Part 2 of the *Reference Manual* the subfield identifier flag is represented by the symbol '@'. Note that the *Manual* follows the convention that in fields which have only a single subfield, the identifier '@Ø' is used; in fields that have more than one subfield '@Ø' is not used and subfields are normally coded '@1', '@2', etc.

Thus it will be observed that the UNISIST implementation of the ISO bibliographic record format uses only 'type 4' fields of the four 'bibliographic field alternatives' shown in the figure at the end of Part 3.

Tagging scheme

The ISO bibliographic record format prescribes three-character tags. Early versions of the standard have insisted that tags should be numeric, and this has been the most common implementation practice; however, the *Reference Manual* assumes that this restriction will be lifted, in accordance with a recommendation which is being put forward to ISO.

Additionally, ISO 2709 assigns special significance to certain groups of tags as specified below:

Tag ØØ1: record identifier data field. In the UNISIST implementation, the content of this field is not defined, since the fundamental record identifier will vary from one user system to another. The principle of reserving tag ØØ1 for an identifier is to be followed; its use is regarded as a matter for agreement between parties to an exchange.

Tag ØØ2-ØØ9: reserved data fields. These are conventionally used to store groups of fixed length data items; they do not carry indicators or subfield identifiers. The use of reserved data fields is not excluded in the UNISIST proposals, but is left undefined. All data elements treated in the Reference Manual are deliberately regarded as variable length, or potentially variable length.

Tag assignments in the Manual have been made arbitrarily from base AØØ. It was felt that the allocation of specific tag representations should be unstructured and non-hierarchical, to be consistent with modern 'table-oriented' programming methods. This has two benefits:

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maximum flexibility of assignment, and effectiveness of table-oriented programme design. An intellectual structuring of groups of tags assigned to 'related' data elements may be useful for some purposes, but this structuring should be reflected in the contents of the tables used to interpret the tags, not in the tag representations themselves. The usefulness of such intellectual groupings is solely for input or output, not for exchange between machine systems.

The alphanumeric format with base AØØ was chosen to avoid confusion with the widely-known MARC systems which use tags in the range 100-999.

Nesting of sub-records

Certain situations may arise in which it is desirable, for bibliographic reasons, to treat a record as including one or more sub-records. For example, if a paper is a translation of an item which has been published elsewhere, it may be necessary to include a citation of the original source as a sub-record within the main record referring to the translation. In general, this situation will normally arise whenever reference must be made in a bibliographic record to one or more related documents, or where it is necessary to treat a collective work at more than one bibliographic level.

A number of techniques may be suitable in different circumstances for dealing with this type of problem:

(a) Use of a 'notes' field. Where the information regarding related items is required solely for display, and need not be processed in a structured way, it may be included in free form as part of a notes field; but this approach renders it useless for computer processing.

(b) Cross-referencing between records. In some circumstances the related items may be entered as separate bibliographic records, with pointers in each direction and an indication of the nature of the relationship between them.

(c) Nesting of sub-records. One or more sub-records, using the same data elements as the main record, may be nested within the bibliographic record, to form a hierarchical structure.

A procedure for structuring a record into a number of sub-records is referred to in ISO 2709, but is not fully defined. It is based on the use of tag ØØ2 as a "sub-record directory", containing pointers to the main directory. This procedure has been adopted in some systems, including, for example, INIS. It is widely regarded by existing users as being less than wholly satisfactory. At the present time, therefore, the *Reference Manual* does not embody any recommendations on the technique to be employed for this purpose.

Physical tape standards

It should be noted that the assumption is made throughout Part 3 of the *Reference Manual* that the basic medium for exchange will be nine-track, half-inch magnetic tape recorded at 800 bpi in NRZI mode in an industry-compatible form, complying where applicable with relevant ISO Recommendations. Extension of the UNISIST exchange format to nine-track tape recorded in other modes or at other packing densities is trivial; extension to physical formats or media which differ in other respects may require more work to define a suitable representation of the exchange record.

Standard separators

The following standard separators or delimiters are used in the ISO bibliographic record format, and therefore in the UNISIST exchange format:

Record separator (terminates a complete bibliographic record)	IS_3 (see Table 1)
Field separator (terminates a complete data field)	IS_2
Subfield identifier flag (introduces a subfield identifier)	IS_1

Chapter 3.2

REPRESENTATION OF EXTENDED CHARACTER SETS

ISO Standard

At the time of writing, a Working Group of ISO/TC46 is developing a comprehensive draft standard for character sets to be used in bibliographic information exchange. When the results of its work become available in the form of an ISO Standard, it is expected that users of the *Reference Manual* will be advised to adopt them, and this chapter will be amended accordingly.

Interim Recommendations

The UNISIST/ICSU-AB Working Group on Bibliographic Descriptions developed its own detailed proposals for the representation of extended character sets. These were based on an existing ISO Recommendation, R646 [12], shown in Table 1 at the end of this chapter, and an existing USSR Standard, GOST 13052-67 [13] (Table 2). The WGBD proposals have been taken into account in the work now being undertaken within ISO/TC46; and in the interim it is recommended that character coding should be based on the ISO and USSR standards referred to above. In the light of the ISO/TC46 developments it is considered inappropriate to lay down any separate guidelines for the representation of extended character sets.

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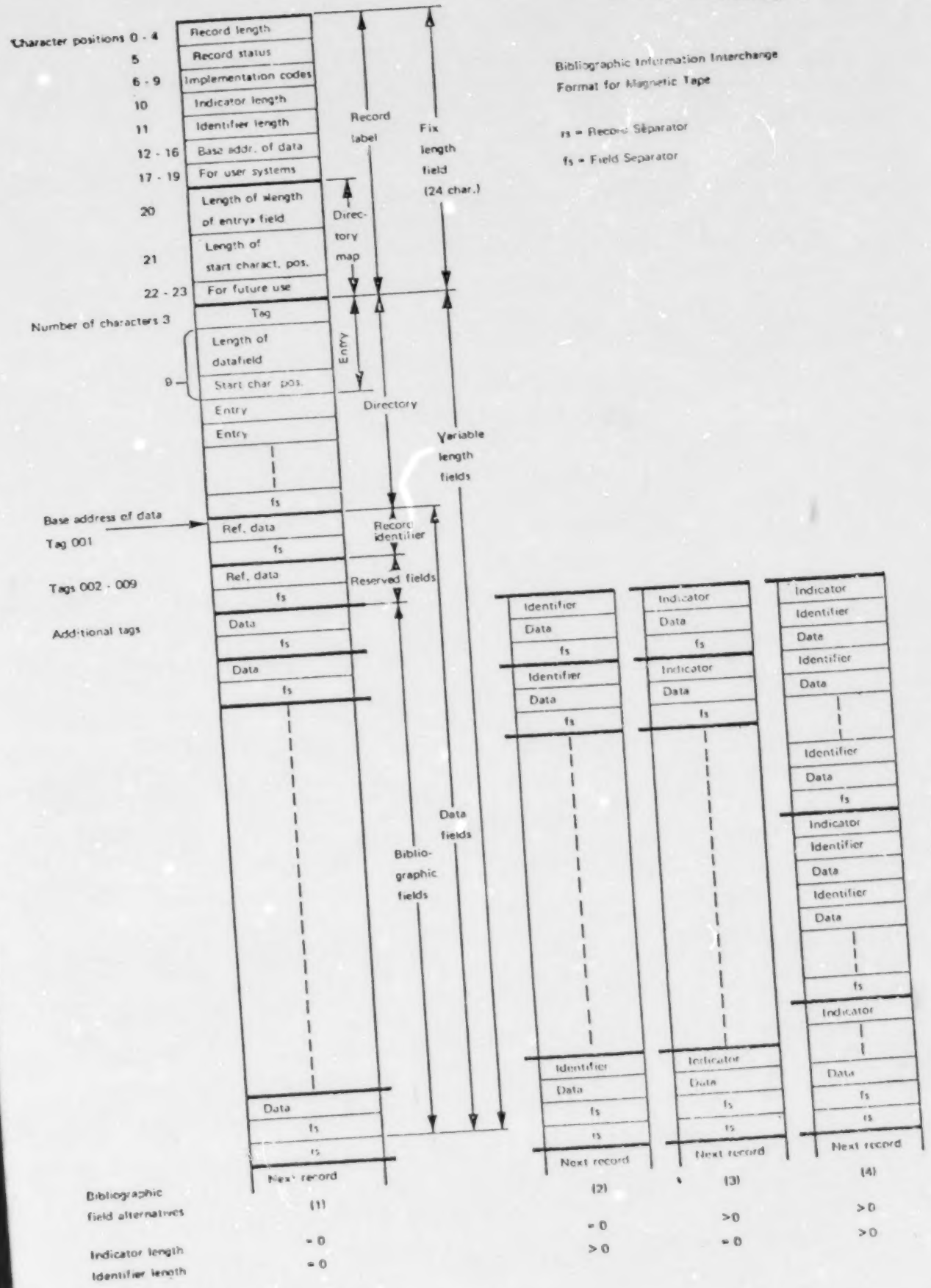

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TABLE 1: ISO set

	0	1	2	3	4	5	6	7
0	NUL	TC_2	SP	0	@	P	`	p
1	TC_1	DC_1	!	1	A	Q	a	q
2	TC_2	DC_2	"	2	B	R	b	r
3	TC_3	DC_3	£	3	C	S	c	s
4	TC_4	DC_4	$	4	D	T	d	t
5	TC_5	TC_8	%	5	E	U	e	u
6	TC_6	TC_9	&	6	F	V	f	v
7	BEL	TC_{10}	'	7	G	W	g	w
8	FE_0	CAN	(	8	H	X	h	x
9	FE_1	EM	)	9	I	Y	i	y
10	FE_2	SUB	*	:	J	Z	j	z
11	FE_3	ESC	+	;	K	[	k	
12	FE_4	IS_4	,	<	L		l	
13	FE_5	IS_3	-	=	M	]	m	
14	SO	IS_2	.	>	N	^	n	—
15	SI	IS_1	/	?	O	_	o	DEL

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TABLE 2: GOST SET

	0	1	2	3	4	5	6	7
0	NUL	TC_7	SP	0	ю	л	Ю	Л
1	TC_1	DC_1	!	1	а	я	А	Я
2	TC_2	DC_2	"	2	б	р	Б	Р
3	TC_3	DC_3	#	3	ц	с	Ц	С
4	TC_4	DC_4	¤	4	д	т	Д	Т
5	TC_5	TC_8	%	5	е	у	Е	У
6	TC_6	TC_9	&	6	ф	ж	Ф	Ж
7	BEL	TC_{10}	'	7	г	в	Г	В
8	FE_0	CAN	(	8	х	ь	Х	Ь
9	FE_1	EM	)	9	и	ы	И	Ы
10	FE_2	SUB	*	:	й	з	Й	З
11	FE_3	ESC	+	;	к	ш	К	Ш
12	FE_4	IS_4	,	<	л	э	Л	Э
13	FE_5	IS_3	-	=	м	щ	М	Щ
14	SO	IS_2	.	>	н	ч	Н	Ч
15	SI	IS_1	/	?	о	_	О	DEL

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EXAMPLES OF COMPLETE BIBLIOGRAPHIC RECORDS

This section embodies examples of each type of literature treated by the *Reference Manual.*

Each example is in three parts:

- the original data derived from the piece;
- implementation codes entered in the leader part of the record to identify literature type and bibliographic level;
- data fields required for the bibliographic description.

Except where otherwise noted, the data fields in these examples have been limited to those identified in Part 1 of the *Manual* as *essential* for the given literature type.

The conventions for representing data fields are identical to those used elsewhere in the *Manual,* and defined in Chapter 1.1 and at the beginning of Part 2.

Where the *Reference Manual* allows certain degrees of freedom, the selection of a particular option in the examples does not imply that it is a 'preferred' form.

Example 1: *SERIAL CONTRIBUTION*

Communications of the ACM, Volume 8, Number 5, May 1965, pages 300-305. 'BLNSYS - A 1401 Operating System with Braille Capabilities'. J.B. LANDWEHR, C. MCLAUGHLIN, H. MUELLER, M. LICHSTEIN AND S.V. POLLACK. University of Cincinnati, Medical Computing Center, Cincinnati, Ohio.

Implementation codes in leader, character positions 6 to 9:
Character position 6: bit position 7 = 1, other bits = zero
" " 7, 8: all zero
" " 9: bit position 7 = 1, other bits = zero
These codes indicate literature type = serial, bibliographic level = analytic.

Data fields

A02	ØØ●●CACMA2	CODEN
A03	Ø1●●Commun.ßACM	'Short title', derived from ISDS
A05	ØØ●28	Volume number
A06	ØØ●25	Issue number
A08	Ø1●1BLNSYSß-ßaß14Ø1ßop	Title of contribution
	eratingßsystemßwithßBr	(original language
	ailleßcapabilities	and alphabet)
A11	Ø1●1Landwehr,ßJ.B.	Author names (field
A11	Ø1●1McLaughlin,ßC.	A11 repeated)
A11	Ø1●1Mueller,ßH.	
A11	Ø1●1Lichstein,ßM.	
A11	Ø1●1Pollack,ßS.V.	
A14	ØØ●1UniversityßofßCinn	Author affiliation
	cinnati,ßMedicalßCompu	
	tingßCenter●2Cincinnat	
	ißOhio●3USA	
A20	ØØ●13ØØ-3Ø5	Page numbers
A21	ØØ●1196505ØØ	Date of issue
A23	ØØ●●EN	Language of text*

Example 2: *'BOOK' (MONOGRAPH)*

'An Insight into Management Accounting'. John Sizer. Penguin Books, Harmondsworth, Middlesex, England. 1969. 341 pp. ISBN 0 14 021087 3.

Implementation codes in leader, character positions 6 to 9:
Character position 6: bit position 6 = 1, other bits = zero
" " 7, 8: all zero
" " 9: bit position 6 = 1, other bits = zero
These codes indicate literature type = 'book', bibliographic level = monographic.

Data fields

A09	Ø1●1AnßinsightßintoßMan	Title of monograph
	nagementßaccounting	(original language
		and alphabet)
A12	Ø1●1Sizer,ßJ.	Author name
A21	ØØ●1196ØØØØ	Date of imprint
A23	ØØ●●EN	Language of text*
A25	ØØ●1PenguinßBooks●2Har	Publisher name
	mondsworth,ßEngland	and location
A26	ØØ●●Ø14Ø21Ø873	ISBN
A29	ØØ●1341	Collation

Example 3: *REPORT (MONOGRAPHIC)*

'Erosionskorrosion i vattenledningar av kopparör'. Lage Knutsson, Einar Mattsson & Bengt-Eric Ramberg. Statens institut för byggnadsforskning, Stockholm: Rapport R23:1971, 29 pp.

English title also given: 'Erosion corrosion in copper water tubing'.

Implementation codes in leader, character positions 6 to 9:
Character position 6: bit position 5 = 1, other bits = zero
" " 7, 8: all zero
" " 9: bit position 6 = 1, other bits = zero
These codes indicate literature type = report, bibliographic level = monographic.

* The code 'EN' is employed here to represent 'English' by way of example only, pending the availability of a standard coding scheme.

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Data fields

A09	∅1●1Erosionskorrosion∅i∅vattenledningar∅av∅k opparör	Title (original language and alphabet)
A09	∅1●1Erosion∅corrosion∅in∅copper∅water∅tubing	English title*
A12	∅1●1Knutsson,∅L.	Author names (field
A12	∅1●1Mattsson,∅E.	A12 repeated)
A12	∅1●1Ramberg,∅B.-E.	
A18	∅∅●1Statens∅institut∅för∅byggnadsforskning●2 Stockholm	Corporate author
A21	∅∅●1197 1∅∅∅∅	Date of issue
A23	∅∅●∅SV	Language of text**
A29	∅∅●129	Collation
A39	∅∅●∅R23:1971	Report number

Example 4: *DISSERTATION*

'Streptokokken van Groep A en van Groep B bij Nuljarigen. Een epidemiologisch Onderzoek'. Academisch Proefschrift ter Verkrijging van de Graad van Doctor in de Geneeskunde aan de Universiteit van Amsterdam ..... Donderdag 29 September 1966 ..... Door Machiel Nicolaas Wilhelm Butter geboren te Amsterdam. Amsterdam 1966, 126 pp.

Implementation codes in leader, character positions 6 to 9:
Character position 6: bit position 4 = 1, other bits = zero
" " 7, 8: all zero
" " 9: bit position 6 = 1, other bits = zero
These codes indicate literature type = dissertation, bibliographic level = monographic.

Data fields

A09	∅1●1Streptokokken∅van∅Groep∅A∅en∅van∅Groep∅B ∅bij∅Nuljarigen.∅Een∅epidemiologisch∅Onderzoek	Title (original language and alphabet)
A12	∅1@1Butter,∅M.N.W.	Author name
A21	∅∅●1196 6∅929	Date of submission
A23	∅∅●∅NE	Language of text***
A29	∅∅●1126	Collation
A41	∅∅●1Universiteit∅van∅Amsterdam	University
A42	∅∅@∅Doctor∅in∅de∅Geneeskunde	Degree level (supplementary element)

* The English title is regarded here as an original title, since it is given on the piece.
** The code 'SV' is employed here to represent 'Swedish' by way of example only, pending the availability of a standard coding scheme.
*** The code 'NE' is employed here to represent 'Dutch' by way of example only, pending the availability of a standard coding scheme.

Note also that field A43 (availability of document), which is an essential element for dissertations, could not be entered in this example since it was not derivable from the information given on the piece.

Example 5: *PATENT*

United States Patent [11] 3,607,127
[72] Inventor Robert W Pfeiffer
Bronxville N.Y.
[21] Appl. No 5,170
[22] Filed Jan. 23,/1970
[45] Patented Sept. 21,/1971
[73] Assignee Pullman Incorporated
Chicago, Ill.
Continuation-in-part of application Ser.No. 719,052, Apr. 5,/1968, now Patent No. 3,492,221, dated Jan. 27,/1970
[54] Apparatus for conversion of hydrocarbons
9 Claims, 4 Drawing Figs. (12 pages)
(Note: codes in square brackets are INID numbers).

Implementation codes in character positions 6 to 9:
Character position 6: bit position 3 = 1, other bits = zero
" " 7, 8: all zero
" " 9: bit position 6 = 1, other bits = zero
These codes indicate literature type = patent, bibliographic level = monographic.

Data fields

A09	∅1@1Apparatus∅for∅conversion∅of∅hydrocarbons	Title of the invention
A22	∅∅●1197 1∅921	Date of publication
A29	∅∅●112	Number of pages
A33	∅∅●1USA●2A∅●5360∅7127	Identification of document*
A34	∅1●1Pfeiffer,∅R.W.	Inventor**
A35	∅6●1Pullman∅Inc.●2Chicago,∅Illinois	Assignee**
A38	∅3●1USA●2A∅●53492221	Reference to a legally-related domestic document (supplementary element)*

* In fields A33 and A38, the code 'USA' is used in subfield 1 by way of example only, pending the availability of a standard coding scheme. The ICIREPAT code for patent documents is entered in subfield 2, in accordance with Appendix D.
** In fields A34 and A35, the indicator is used to distinguish the relationship between the person or corporate body cited and the document in question. INID 72 corresponds to indicator value '6': see table in Part 2, under field A34. Note also that in field A38, the indicator value '3' denotes a relationship by continuation (including continuation-in-part): see under field A38 in Part 2.

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Example 6: *CONFERENCE PAPER*

(This example refers to an individual paper from a conference proceedings published as a monograph).

W.D. Kingery, Editor: 'Ice and Snow: Properties, Processes and Applications'. Proceedings of a Conference held at The Massachusetts Institute of Technology, February 12-16, 1962. The M.I.T. Press, Cambridge, Massachusetts, 1963. (xv+684pp.) 'On the Metamorphism of Snow', M.R. de Quervain, pp. 377-390, 11 references.

Implementation codes in character positions 6 to 9:

Character position 6: bit position 6 =1, bit position 2 = 1, other bits = zero
" " 7, 8: all zero
" " 9: bit position 7 = 1, other bits = zero

These codes indicate literature type = conference proceedings published in 'book' form, bibliographic level = analytic (since the record refers to a single paper).

Data fields

AØ9	Ø1●1Ice␣and␣snow:␣properties,␣processes␣and␣applications	Title of monograph
A12	Ø2●1Kingery,␣W.D.	Editor
A21	ØØ●119631ØØØØ	Date of imprint
A25	ØØ●1M.I.T.␣Press●2Cambridge,␣Mass.	Publisher name and location
A29	ØØ●1699●2xv+684	Collation (supplementary element)*
AØ8	Ø1●1On␣the␣metamorphism␣of␣snow	Title of paper
A11	Ø1●1de=Quervain,␣M.R.	Author
A2Ø	ØØ●1377-39Ø	Page numbers
A23	ØØ●ØEN	Language of text**
A45	ØØ●Ø11	Number of references (supplementary element)
A3Ø	Ø1●1Conference␣on␣ice␣and␣snow:␣properties,␣processes␣and␣applications	Name of meeting (optional, since identical to field AØ9)
A31	ØØ●1M.I.T.,␣Cambridge,␣Mass.	Location of meeting
A32	ØØ@11962Ø212@312-16␣Feb.␣1962	Date of meeting

* The use of subfield 2 in field A29 is by way of example, and not necessarily a recommended practice.

** The code 'EN' is employed here to represent 'English' by way of example only, pending the availability of a standard coding scheme.

Appendices

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Appendix A (provisional)

COUNTRY CODES

An ISO Standard for country codes is in the course of preparation, and it had been hoped that it would be available by the date of publication of this first edition of the UNISIST *Reference Manual*. In the event, approval of the draft Standard has been delayed. Nevertheless, publication of a Standard is expected in the near future, and users of the *Manual* are referred to the Secretariat of ISO/TC46 for information on this point.

While it is impossible at this time to provide a reference to an agreed Standard, examples given in the text of the *Manual* have been taken from an ISO draft: *they must, not, however be treated as authoritative.*

This Appendix will be replaced as soon as the proposed ISO Standard becomes available.

Appendix B (provisional)

LANGUAGE CODES

An ISO Standard for language codes is in the course of preparation, to replace an existing Recommendation (ISO/R639), which is now considered to be incomplete and unsuitable for use in machine systems.

Users of the *Reference Manual* are referred to the Secretariat of ISO/TC37 for information on this point.

This Appendix will be replaced as soon as the proposed ISO Standard becomes available.

Appendix C (provisional)

TRANSLITERATION SCHEMES

Section C.1 in this appendix covers transliteration or transcription of languages which use non-Roman alphabets. Section C.2 covers transcription of languages which use a modified Roman alphabet. In both cases the objective is to represent the required character set within the limitations of a basic Roman alphabet, comprising letters a-z, without accents or diacriticals, so that it can readily be processed in machine-readable form. To this end, it is sometimes necessary to sacrifice the ability to convert back unambiguously from the transliterated form to the original alphabet.

C.1 Transliteration or transcription of non-Roman alphabets

At the time of compiling the present version of the *Reference Manual*, the only full transliteration scheme available is for the Cyrillic alphabet and its variants. Other alphabets will be added as and when suitable transliteration systems can be adopted.

C.1.1 Cyrillic

The tables on the following three pages give a full, non-reversible, transliteration scheme for the Cyrillic alphabet, based rather closely on current ISO Recommendations, but with all diacritical marks eliminated.

Letter number	Cyrillic char.				Used in						Proposed UNISIST translit.
	printed		manuscript		Russian	Ukrainian	Belorus.	Serbian	Macedon.	Bulgar.	
1	а	А			X	X	X	X	X	X	a
2	б	Б			X	X	X	X	X	X	b
3	в	В			X	X	X	X	X	X	v
4	г	Г			X	X	X	X	X	X	g
5	ґ	Ґ				X					gh
6	д	Д			X	X	X	X	X	X	d

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Letter number	Cyrillic char. printed		Cyrillic char. manuscript		Used in Russian	Ukrain.	Belorus.	Serbian	Macedo.	Bulgar.	Proposed UNISIST translit.
7	ђ	Ђ						X			dj
8	ґ	Ґ							X		g
9	е (ё)	Е (Ё)			X	X	X	X	X	X	e
10	є	Є				X					je
11	ж	Ж			X	X	X	X	X	X	zh
12	з	З			X	X	X	X	X	X	z
13	ѕ	Ѕ							X		dz
14	и	И			X	X		X	X	X	i
15	і	І			X	X	X				yi
16	ї	Ї				X					yi
17	ј	Ј						X	X		j
18	й	Й			X	X	X			X	j
19	к	К			X	X	X	X	X	X	k
20	л	Л			X	X	X	X	X	X	l
21	љ	Љ						X	X		lj
22	м	М			X	X	X	X	X	X	m
23	н	Н			X	X	X	X	X	X	n
24	њ	Њ						X	X		nj
25	о	О			X	X	X	X	X	X	o
26	п	П			X	X	X	X	X	X	p
27	р	Р			X	X	X	X	X	X	r
28	с	С			X	X	X	X	X	X	s
29	т	Т			X	X	X	X	X	X	t

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Letter number	Cyrillic char. printed		manuscript		Used in: Russian	Ukrain.	Belorus.	Serbian	Macedo.	Bulgar.	Proposed UNISIST translit.
30								X			cj
31									X		k
32					X	X	X	X	X	X	u
33							X				w
34					X	X	X	X	X	X	f
35					X	X	X	X	X	X	kh
36					X	X	X	X	X	X	ts
37					X	X	X	X	X	X	ch
38								X	X		dzh
39					X	X	X	X	X	X	sh
40					X	X				X	shch
41					X	X	X			X	"
42					X		X				y
43					X	X	X			X	'
44					X		X			X	'
45					X		X				eh
46					X	X	X			X	yu
47					X	X	X			X	ya
48										X	'

C.2 Transcription of accented letters in languages which use a modified Roman alphabet

French	ç	to be represented by	c
	all other accents to be suppressed (acute, grave, circumflex, etc.)		
German	ä	to be represented by	ae
	ö	" " " "	oe
	ü	" " " "	ue
Scandinavian languages	å	to be represented by	aa
	ø	" " " "	oe
Spanish	ñ	to be represented by	n

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Appendix D

ICIREPAT CODES FOR PATENT DOCUMENTS

In fields A33 and A38, reference is made to the ICIREPAT code as the preferred means of identifying 'type of patent document'. This Appendix embodies an ICIREPAT paper which defines a 'standard code for identification of different kinds of patent document', and lists a substantial number of known types of document.

It will be noted that in fields A33 and A38 the ICIREPAT code is specified as a two-character fixed-length code. This Appendix defines only the first character, which is always a letter of the Roman alphabet. The second character, which is numeric, will be defined by national patent offices. If only the first character is known, it is recommended that the second character position be entered as '␣' (blank or space).

WIPO

ICIREPAT Manual

Ref: Shared Systems--SI.8 (E)

page: 4.3.8.1(E)

STANDARD CODE FOR IDENTIFICATION OF DIFFERENT KINDS OF PATENT DOCUMENTS

Introduction

1. The recommendation provides for groups of letter codes in order to distinguish patent documents. The letter codes also facilitate the storage and retrieval of such documents.

2. If any Office wants to amplify the information contained in the letter code, this letter code may be optionally associated with a numerical code. The meaning of such numerical code should then be defined by each Patent Office availing itself of this option.

3. The code also provides for a letter for non-patent literature documents (N) and for documents to be restricted to the internal use of Patent Offices (X) (e.g. confidential documents, not to be disclosed outside the Office). See in this respect also SI.1 (ICIREPAT Manual pages 4.3.1.1 to 4.3.1.4).

Definitions

4. For the purposes of this recommendation, the expression "patent documents" includes patents for inventions, inventors' certificates, utility certificates, utility models, patents or certificates of addition, inventors' certificates of addition, utility certificates of addition and published applications therefor.

5. For the purposes of this recommendation, the term "entry in an official gazette" means at least one comprehensive announcement in an official gazette regarding the making available to the public of the complete text, claims (if any) and drawings (if any) of a patent document.

6. For the purposes of this recommendation, the terms "publication" and "published" are used in the sense of

(i) making available to the public for inspection or copying on request

(ii) reproducing in multiple copies

(iii) printing

of a patent document.

Explanation: If, at a particular procedural stage, a copy of the document is first made available to the public for inspection or copying and is then, at the same procedural stage, printed or reproduced in multiple copies, only a single publication is considered to have occurred. If, on the other hand, printing or multiple reproduction results from a new procedural stage, this printing is considered to be a further publication of the document, even if the texts at the two stages are identical.

7. According to certain national patent laws or regulations, the same patent application may be published at various procedural stages. For the purposes of this recommendation, a publication level is defined as the level corresponding to a procedural stage at which normally a document is published under a given national patent law.

Recommendation

8. It is recommended that the code:

(a) be used for the recording of the "kind of document" in machine-readable data carriers, such as 80-column punched cards, magnetic tapes, aperture cards, etc.;

(b) be used on the first page of patent documents, preferably near the document number, if these have been published in the sense of paragraph 6;

Form 02

Date: April 1974

(c) be used in entries in official gazettes or, if all entries in a section of the Gazette relate to the same kind of a document at the beginning of such a section.

9. Code

The code is subdivided into mutually exclusive groups of letters. The groups characterize patent documents and documents specified in paragraph 3. Groups 1 - 5 comprise one or several letters enabling identification of documents pertaining to different publication levels.

Group 1 Use for primary or major series of patent documents

A First publication level
B Second publication level
C Third publication level

Group 2 Use for secondary series of patent documents

E First publication level
F Second publication level
G Third publication level

Group 3 Use for further series of patent documents, as the special requirements of each Office may be

H
I

Group 4 Use for medicament patent documents

M

Group 5 Use for utility model documents having a numbering series other than the documents of Group 1

U First publication level
Y Second publication level
Z Third publication level

Group 6 Other (see paragraph 3)

N Non-patent literature documents
X Documents restricted to the internal use of Offices

10. It is understood that documents resulting from a patent application and being identified as the major series will fall under Group 1 (e.g. DT Offenlegungsschrift, Auslegeschrift and Patentschrift). However, documents identified as a secondary series will fall under Group 2 (e.g. FR patent of addition under old law, US reissue). In exceptional cases of need for a further series, Group 3 is reserved for such purposes (e.g. US defensive publication). Group 4 applies only, at present, to special documents concerning the medicament patents published in France. If any country would publish similar documents, Group 4 should then be used.

11. As indicated in paragraph 2, the above letter code may optionally be associated with a numerical code to amplify the information represented by the letter code. For this numerical code only digits 1 to 9 should be used. The significance of this code will be defined by any national Office applying such code and communicated to the International Bureau, which will publicize this information. The numerical code must always be interpreted in conjunction with the country code and the above letter code.

12. As an appendix to this recommendation a list of patent documents, past and currently published, and intended to be published in the future, divided in accordance with the code, is given.

[Appendices I & II follow]

Original: STAC III No. 43d, expanded to STAC III No. 93a
Adopted by first session of TCC
Revised and adopted by fifth session of TCST (document IC/TCST/17(73), Annex III)
Revised version amended and adopted by tenth session of TCC (document IC/TCC/X/19, Annex IV)
Amended and adopted by fifth PLC ordinary session (document IC/PLC/V/II, paragraphs 65 to 68)

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Appendix I

List of Patent Documents, Past and Currently Published, and Intended to be Published in the Future, Divided in Accordance with this Code

Code: A Patent Documents Numbered in Primary or Major Series - First Publication Level

Examples:	Austria	Patent Application published in the sense of paragraph 6(i)
	Belgium	Brevet d'invention/Uitvindingsoctrooi
	Belgium	Brevet de perfectionnement/Verbeteringsoctrooi
	Bulgaria	Opisanie na izobretenie po patent
	Canada	Patent
	Cuba	Patent Application published in the sense of paragraph 6(i)
	Czechoslovakia	Patent Application published in the sense of paragraph 6(i)
	Czechoslovakia	Inventors' Certificate Application published in the sense of paragraph 6(i)
	Denmark	Patent Application published in the sense of paragraph 6(i)
	Egypt	Patent specification
	Europat	Document published after 18 months
	Finland	Patent Application published in the sense of paragraph 6(i)
	France	Brevet d'invention (old law)
	France	Brevet d'invention, première et unique publication
	France	Certificat d'addition à un brevet d'invention, première et unique publication
	France	Certificat d'utilité, première et unique publication
	France	Certificat d'addition à un certificat d'utilité, première et unique publication
	France	Demande de brevet d'invention, première publication
	France	Demande de certificat d'addition à un brevet d'invention, première publication
	France	Demande de certificat d'utilité, première publication
	France	Demande de certificat d'addition à un certificat d'utilité, première publication
	German Democratic Republic	Patentschrift (Ausschliessungspatent)
	German Democratic Republic	Patentschrift (Wirtschaftspatent)
	Germany, Federal Republic of	Offenlegungsschrift
	Hungary	Patent Application published in the sense of paragraph 6(i)
	India	Patent specification
	Ireland	Patent specification
	Italy	Brevetto per invenzione industriale
	Japan	Kokai tokkyo koho
	Luxembourg	Brevet d'invention
	Luxembourg	Certificat d'addition à un brevet d'invention
	Netherlands	Ter inzage gelegde octrooiaanvrage
	Norway	Patent Application published in the sense of paragraph 6(i)
	Pakistan	Patent specification

Code: A (continued)

Examples:	PCT	Pamphlet published after 18 months
	Poland	Opis patentovy
	Romania	Descrierea invenţiei
	Soviet Union	Opisanie izobreteniya k patentu
	Soviet Union	Opisanie izobreteniya k avtorskomy svidetelstvu
	Spain	Patente de invención
	Sweden	Patent Application published in the sense of paragraph 6(i)
	Switzerland	Auslegeschrift/Mémoire Exposé/Esposto Memoriale (Patent Application published in the sense of paragraphs 6(i) and 6(iii) pertaining to the technical fields for which search and examination as to novelty are made)
	Switzerland	Patentschrift/Exposé d'invention/Esposto d'invenzione (Patent published in the sense of paragraph 6(iii) and pertaining to the technical fields for which neither search nor examination as to novelty is made)
	United Kingdom	Patent specification
	United States	Patent
	Yugoslavia	Patentni spis

Code: B Patent Documents Numbered in Primary or Major Series - Second Publication Level

Examples:	Australia	Patent specification
	Austria	Patentschrift
	Cuba	Patente de invención
	Czechoslovakia	Popis vynálezu k patentu
	Czechoslovakia	Popis vynálezu k autorskému osvědčení
	Denmark	Fremlaeggelsesskrift
	Finland	Kuulutusjulka isu - Utläggningsskrift
	France	Brevet d'invention, deuxième publication de l'invention
	France	Certificat d'addition à un brevet d'invention, deuxième publication de l'invention
	France	Certificat d'utilité, deuxième publication de l'invention
	France	Certificat d'addition à un certificat d'utilité, deuxième publication de l'invention
	Germany, Federal Republic of	Auslegeschrift
	Hungary	Szabadalmi leirás
	Japan	Tokkyo koho
	Netherlands	Openbaar gemaakte octrooiaanvrage
	Norway	Utlegningsskrift
	Sweden	Utläggningsskrift
	Switzerland	Patentschrift/Exposé d'invention/Espoto d'invenzione (Patent published in the sense of paragraph 6(iii) and pertaining to the technical fields for which search and examination as to novelty are made)

Code: C Patent Documents Numbered in Primary or Major Series - Third Publication Level

Examples:	Denmark	Patent
	Finland	Patentti - Patent
	Germany, Federal Republic of	Patentschrift
	Netherlands	Octrooi

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Code: C (continued)

Examples:	Norway	Patent
	Sweden	Patentskrift

Code: E — Patent Documents Numbered in Secondary Series - First Publication Level

Examples:	France	Certificat d'addition à brevet d'invention (old law)
	United States	Reissue

Code: H or I — Patent Documents Numbered in Further Series

Example:	United States	Defensive publication

Code: M — Medicament Patent Documents

Examples:	France	Brevet spécial de médicament
	France	Addition à un brevet spécial de médicament

Code: U — Utility Model Documents Numbered in Series other than the Documents of Group I - First Publication Level

Examples:	Germany, Federal Republic of	Gebrauchsmuster
	Japan	Kokai jitsuyo shinan koho
	Spain	Utility Model Application published in the sense of paragraph 6(i)

Code: Y — Utility Model Documents Numbered in Series other than the Documents of Group I - Second Publication Level

Examples:	Japan	Jitsuyo shinan koho
	Spain	Modelo de utilidad

/Appendix II follows/

Appendix II

Definition of the Optional Numerical Code Adopted by Each Country Applying it, in conjunction with the One-letter Code

Country	Patent Documents	One-Letter Code	Numerical Code
France	Demande de brevet d'invention, première publication	A	1
	Demande de certificat d'addition à un brevet d'invention, premère publication	A	2
	Demande de certificat d'utilité, première publication	A	3
	Demande de certificat d'addition à un certificat d'utilité, première publication	A	4
	Brevet d'invention, première et unique publication	A	5
	Certificat d'addition à un brevet d'invention, première et unique publication	A	6
	Certificat d'utilité, première et unique publication	A	7
	Certificat d'addition à un certificat d'utilité, première et unique publication	A	8
	Brevet d'invention, deuxième publication de l'invention	B	1
	Certificat d'addition à un brevet d'invention, deuxième publication de l'invention	B	2
	Certificat d'utilité, deuxième publication de l'invention	B	3
	Certificat d'addition à un certificat d'utilité, deuxième publication de l'invention	B	4
Switzerland	Auslegeschift/Mémoire Exposé/ Esposto Memoriale (Patent Application published in the sense of paragraph 6(i) and 6(iii) and pertaining to the technical fields for which search and examination as to novelty are made)	A	4
	Patentschrift/Exposé d'invention/ Esposto d'invenzione (Patent published in the sense of paragraph 6(iii) and pertaining to the technical fields for which neither search nor examination as to novelty are made)	A	5
	Patentschrift/Exposé d'invention/ Esposto d'invenzione (Patent published in the sense of paragraph 6(iii) and pertaining to technical fields for which search and examination as to novelty are made)	B	5

Date: April 1974

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Appendix E

INID NUMBERS FOR IDENTIFICATION OF PATENT DATA ELEMENTS

This Appendix embodies an ICIREPAT paper which defines a set of codes for identification of bibliographic data on the first page of a patent document and in entries in an official gazette. These codes, known as INID numbers, have been referred to in Chapter 1.5 and in the descriptions of individual patent data elements in Part 2.

INID numbers are organized into decimal groups (1Ø,2Ø, etc.), each of which is subdivided into a number of specific items (12, 13, 14, 21, 22, 23, etc.).

The individual codes are used only with the precise meanings defined on subsequent pages. If none of the specific item definitions is applicable, the generic code for the group (ending in Ø) may be used.

This Appendix is included for reference purposes only, to assist in creating bibliographic records for patent documents which use the INID system. INID numbers are not themselves used in UNISIST exchange records.

ICIREPAT

Recommendation concerning Bibliographic Data

(Identification by INID Codes and Minimum Required)

on the First Page of a Patent Document and in Entries in an Official Gazette

Introduction

1. The recommendation STAC III No. 62d of September 1967 provides for means whereby the various data appearing on the first page of a patent document can be identified without knowledge of the language used and the laws applied. This recommendation is already successfully applied by various Patent Offices.

2. The recommendation STAC III No. 77a of September 1967 likewise provides for means whereby the various data appearing in entries in official gazettes and like publications can be identified.

3. It was considered necessary to revise these recommendations in certain respects in the light of experience with their use.

4. It was also considered necessary to include in the recommendation an indication of the minimum bibliographic data to be provided on the first page of such a document, and in an entry in such a gazette, in order to give the information required for subject-matter and legal patent searches, including finding patent families, and for documentation purposes, such as the compiling of indexes.

Definitions

5. " Patent documents " includes patents, inventors' certificates, utility models or certificates, and applications therefor. " Documents " means patent documents unless otherwise stated.

6. " Making available to the public " means *(a)* publication by printing or similar process or *(b)* laying open for public inspection and copying on request.

7. " Entry in an official gazette " means at least one comprehensive announcement in an official gazette, regarding the making available to the public of the complete text, claims (if any) and drawings (if any) of a patent document.

8. " INID " is an acronym for " ICIREPAT Numbers for the Identification of Data."

General

9. The list of definitions of bibliographic data elements with their corresponding INID codes is given below. The INID codes which are preceded by a single asterisk (*) relate to those data elements which are considered to be the minimum elements which should appear on the first page of a document, and in an entry in an official gazette. The INID codes which are preceded by a double asterisk (**) relate to those data elements which are considered to be minimum elements in circumstances specified in the accompanying notes.

10. The INID codes should be associated with the corresponding data elements in so far as these elements normally appear on the first page of the document or in the entry in the official gazette. The INID codes should preferably be indicated using Arabic numerals within small circles or — if this is not feasible — in parentheses, immediately before the corresponding data element. Provided the presentation of bibliographic data elements in entries in an official gazette is uniform INID codes may be applied to the data elements in a representative specimen entry in each gazette issued, instead of being included in each entry.

11. If data elements to which INID codes are assigned in accordance with this recommendation do not appear on the first page of a document or in an entry in an official gazette — because they are not applicable (e. g. when no priority is claimed) or for some other reason — it is not necessary to call attention to the non-existence of such elements (e. g. by leaving a space or by providing the relevant INID code followed by a dash).

12. Two or more INID codes may be assigned to a single data element when necessary.

13. The list of data elements has been organized into categories (10, 20 . . . 70) to facilitate grouping of related elements. Each category has two or more sub-divisions to each of which an INID code has been assigned. If none of the specific codes can be assigned to a data element which clearly falls within the category definition, the relevant category code, ending in 0, should be used.

14. In order that the users of patent documents and official gazettes may be enabled to make maximum use of these INID codes, it is recommended that a list of the codes be published in Patent Office or other official publications, e. g. official gazettes, at regular intervals.

Implementation

15. It is, of course, open to each Patent Office to implement this recommendation either in its entirety or to some lesser extent, whichever it finds more convenient.

(10) Document identification

- ***(11) Number of the document**
- ****(19) ICIREPAT country code, or other identification, of the country publishing the document**

(Minimum data element for documents only)**

(20) Domestic filing data

- ***(21) Number(s) assigned to the application(s), e. g. " Numéro d'enregistrement national ", " Aktenzeichen "**
- ***(22) Date(s) of filing application(s)**
- ***(23) Other date(s) of filing, including exhibition filing date and date of filing complete specification following provisional specification**

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(30) Convention priority data

*(31) Number(s) assigned to priority application(s)

*(32) Date(s) of filing of priority application(s)

*(33) Country (countries) in which priority application(s) was (were) filed

(40) Date(s) of making available to the public

**(41) Date of making available to the public by viewing, or copying on request, an unexamined document, on which no grant has taken place on or before the said date

**(42) Date of making available to the public by viewing, or copying on request, an examined document, on which no grant has taken place on or before the said date

**(43) Date of publication by printing or similar process of an unexamined document, on which no grant has taken place on or before the said date

**(44) Date of publication by printing or similar process of an examined document, on which no grant has taken place on or before the said date

**(45) Date of publication by printing or similar process of a document, on which grant has taken place on or before the said date

(46) Date of publication by printing or similar process of the claim(s) only of a document

**(47) Date of making available to the public by viewing, or copying on request, a document on which grant has taken place on or before the said date

(** Minimum data element for documents only, the minimum data requirement being met by indicating the date of making available to the public the document concerned)

(50) Technical information

*(51) International Patent Classification

(52) Domestic or national classification

(53) Universal Decimal Classification

*(54) Title of the invention

(55) Keywords

(56) List of prior art documents, if separate from descriptive text

(57) Abstract or claim

(58) Field of search

(60) Reference(s) to other legally related domestic document(s)

*(61) Related by addition(s)

*(62) Related by division(s)

*(63) Related by continuation(s)

*(64) Related by reissue(s)

(70) Identification of parties concerned with the document

[(75) and (76) are intended primarily for use by countries in which the national laws require that the inventor and applicant are normally the same. In other cases (71) and (72) or (71), (72) and (73) should generally be used]

**(71) Name(s) of applicant(s)

(72) Name(s) of inventor(s) if known to be such

**(73) Name(s) of grantee(s)

(74) Name(s) of attorney(s) or agent(s)

**(75) Name(s) of inventor(s) who is (are) also applicant(s)

**(76) Name(s) of inventor(s) who is (are) also applicant(s) and grantee(s)

(** For documents on which grant has taken place on or before the date of making available to the public, and gazette entries relating thereto, the minimum data requirement is met by indicating the grantee, and for other documents by indicating the applicant)

Appendix F

TABLES FOR CALCULATING CODEN CHECK CHARACTERS

Tables 1 and 2 on following pages are to be used for the manual calculation of CODEN check characters, in accordance with the look-up method described below. The algorithm for calculating CODEN check characters by computer programme is given in the notes on field AØ2.

Instructions for use

Look up the character in each position of the CODEN (proceeding from left to right) in the "CHARACTER" column of Table 1. Move right to the appropriate value column for the particular position of CODEN under consideration. Add the numeric value found to a cumulative total for all positions of the CODEN under consideration. When all five (5) positions have been handled and their values accumulated, search for the accumulated value in the "TOTAL" column of Table 2. The correct check character is to the immediate right of the "TOTAL" value.

Example: The check character for the CODEN "BOOKA" is found by calculating the sume of the position values for the characters of the CODEN as follows:

From Table 1:

B	= 22
O	= 3
O	= 7
K	= 33
A	= 1
Total	= 66

By reference to Table 2, a total of 66 gives the check character = 7

CODEN is then BOOKA7

TABLE 1:

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	C Pos 1	O Pos 2	D Pos 3	E Pos 4	N Pos 5
Character	Pos 1	Pos 2	Pos 3	Pos 4	Pos 5
A	11	7	5	3	1
B	22	14	1Ø	6	2
C	33	21	15	9	3
D	1Ø	28	2Ø	12	4
E	21	1	25	15	5
F	32	8	3Ø	18	6
G	9	15	1	21	7
H	2Ø	22	6	24	8
I	31	29	11	27	9
J	8	2	16	3Ø	1Ø
K	19	9	21	33	11
L	3Ø	16	26	2	12
M	7	23	31	5	13
N	18	3Ø	2	8	14
O	29	3	7	11	15
P	6	1Ø	12	14	16
Q	17	17	17	17	17
R	28	24	22	2Ø	18
S	5	31	27	23	19
T	16	4	32	26	2Ø
U	27	11	3	29	21
V	4	18	8	32	22
W	15	25	13	1	23
X	26	32	18	4	24
Y	3	5	23	7	25
Z	14	12	28	1Ø	26

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TABLE 1 (CONTINUED)

	C Pos 1	O Pos 2	D Pos 3	E Pos 4	N Pos 5
Character	Pos 1	Pos 2	Pos 3	Pos 4	Pos 5
1	25	19	33	13	27
2	2	26	4	16	28
3	13	33	9	19	29
4	24	6	14	22	3Ø
5	1	13	19	25	31
6	12	2Ø	24	28	32
7	23	27	29	31	33
8	Ø	Ø	Ø	Ø	Ø
9	11	7	5	3	1
Ø	22	14	1Ø	6	2

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TABLE 2:

Total	Check Character	Total	Check Character	Total	Check Character	Total	Check Character
Ø	9	24	X	48	N	72	D
1	A	25	Y	49	O	73	E
2	B	26	Z	5Ø	P	74	F
3	C	27	2	51	Q	75	G
4	D	28	3	52	R	76	H
5	E	29	4	53	S	77	I
6	F	3Ø	5	54	T	78	J
7	G	31	6	55	U	79	K
8	H	32	7	56	V	8Ø	L
9	I	33	8	57	W	81	M
1Ø	J	34	9	58	X	82	N
11	K	35	A	59	Y	83	O
12	L	36	B	6Ø	Z	84	P
13	M	37	C	61	2	85	Q
14	N	38	D	62	3	86	R
15	O	39	E	63	4	87	S
16	P	4Ø	F	64	5	88	T
17	Q	41	G	65	6	89	U
18	R	42	H	66	7	9Ø	V
19	S	43	I	67	8	91	W
2Ø	T	44	J	68	9	92	X
21	U	45	K	69	A	93	Y
22	V	46	L	7Ø	B	94	Z
23	W	47	M	71	C	95	2

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TABLE 2 (CONTINUED)

Total	Check Character	Total	Check Character	Total	Check Character	Total	Check Character
96	3	12Ø	R	144	H	168	7
97	4	121	S	145	I	169	8
98	5	122	T	146	J	17Ø	9
99	6	123	U	147	K		
1ØØ	7	124	V	148	L		
1Ø1	8	125	W	149	M		
1Ø2	9	126	X	15Ø	N		
1Ø3	A	127	Y	151	O		
1Ø4	B	128	Z	152	P		
1Ø5	C	129	2	153	Q		
1Ø6	D	13Ø	3	154	R		
1Ø7	E	131	4	155	S		
1Ø8	F	132	5	156	T		
1Ø9	G	133	6	157	U		
11Ø	H	134	7	158	V		
111	I	135	8	159	W		
112	J	136	9	16Ø	X		
113	K	137	A	161	Y		
114	L	138	B	162	Z		
115	M	139	C	163	2		
116	N	14Ø	D	164	3		
117	O	141	E	165	4		
118	P	142	F	166	5		
119	Q	143	G	167	6		

References

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Items marked with an asterisk (*) are considered *essential* for users of the *Reference Manual.*

*1 ISO 2709 - 1973: Documentation - Format for bibliographic information interchange on magnetic tape.

2 UNISIST International Serials Data System: *Guidelines for ISDS*, Unesco: Paris 1973.

3 IFLA: International Standard Bibliographic Description for Serials (in preparation).

4 ISO/TC46 fifth draft proposal: Patents. Bibliographical references. Essential and complementary elements.

5 ICIREPAT Recommendations concerning bibliographic data on the fi..t page of a patent document and in entries in an official gazette. (Incorporated in Appendix E).

*6 ISO DIS 3297 - 1973: International Standard Serial Numbering.

7 *CODEN for Periodical Titles*, ASTM Data Series DS23B, American Society for Testing and Materials: Philadelphia 1970 (2 vols).

*8 ISO/R4 - 1972: Documentation - International code for the abbreviation of titles of periodicals.

*9 ISO 833 - 1973: Documentation - International list of periodical title-word abbreviations.

10 ISO/R2014 - 1971: Writing of calendar dates in all-numeric form.

*11 ISO 2108 - 1972: International Standard Book Numbering.

12 ISO/R64o - 1973: 7-bit coded character sets for information processing interchange.

13 GOST 13052-67 (USSR standard for 7-bit coded character sets).